

# MDX-C800REC

## SERVICE MANUAL

AEP Model  
UK Model  
E Model



Model Name Using Similar Mechanism	NEW
Mini Disc Mechanism Type	MG-715B-160
Optical Pick-up Name	KMS-263A

### SPECIFICATIONS

#### MD recorder section

Signal-to-noise ratio	92 dB
Frequency response	10 - 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	790 nm
Emission Duration	Continuous
Laser output power	Less than 5 mW*

\* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

#### Tuner section

##### FM

Tuning range	87.5 - 108.0 MHz
Aerial terminal	External aerial connector
Intermediate frequency	10.7 MHz/450 kHz
Usable sensitivity	8 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	66 dB (stereo), 72 dB (mono)
Harmonic distortion at 1 kHz	0.6% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 - 15,000 Hz

##### MW/LW

Tuning range	MW : 531 - 1,602 kHz LW : 153 - 279 kHz
Aerial terminal	External aerial connector
Intermediate frequency	10.71 MHz / 450 kHz
Sensitivity	MW : 30 $\mu$ V LW : 40 $\mu$ V

#### Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 - 8 ohms
Maximum power output	45 W $\times$ 4 (at 4 ohms)

#### General

Outputs	Audio outputs Power aerial relay control lead Power amplifier control lead
Inputs	Telephone ATT control lead Digital input connector BUS audio input connector BUS control input connector
Tone controls	Bass $\pm$ 9 dB at 100 Hz Treble $\pm$ 9 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 $\times$ 50 $\times$ 184 mm (w/h/d)
Mounting dimension	Approx. 182 $\times$ 53 $\times$ 163 mm (w/h/d)
Mass	Approx. 1.5 kg
Supplied accessories	Parts for installation and connections (1 set) Front panel case (1)

U.S. and foreign patents licensed from Dolby laboratories Licensing Corporation.

*Design and specifications are subject to change without notice.*

## FM/MW/LW MINI DISC RECORDER

# SONY®

## SERVICE NOTE

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

### Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

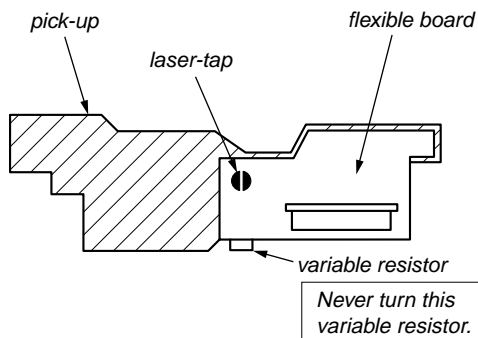
The flexible board is easily damaged and should be handled with care.

### NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

### NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-263A)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## Precautions

**CLASS 1  
LASER PRODUCT**

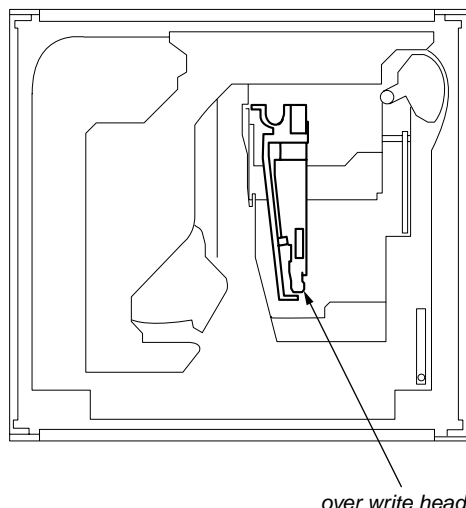
### CAUTION :

INVISIBLE LASER RADIATION WHEN OPEN.  
AVOID EXPOSURE TO BEAM.

This label is located on the drive unit's internal chassis.

### HANDLING PRECAUTION FOR THE OVER WRITE HEAD

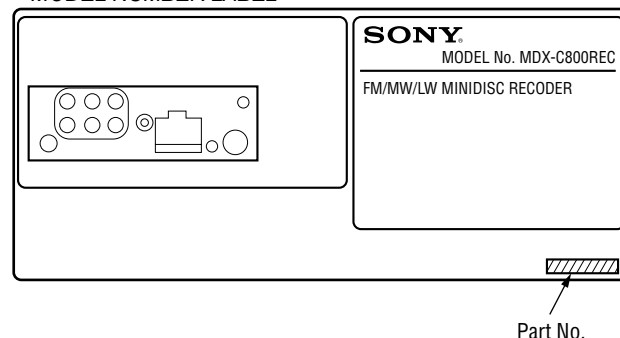
The over write head is susceptible to damage. When adjusting and checking the over write head, it requires careful handling.



### MODEL IDENTIFICATION

MDX-C800REC have 3 type models.

#### -MODEL NUMBER LABEL-



Part No.	Model
3-048-218-0□	TYPE1
3-048-219-0□	TYPE2
3-048-220-0□	TYPE3

## TABLE OF CONTENTS

### 1. GENERAL

Location of controls .....	4
Getting Started .....	4
Setting the clock .....	4
MD player CD/MD unit .....	5
Recording on an MD .....	7
Editing an MD .....	8
Radio .....	10
RDS .....	10
DAB .....	11
Other Functions .....	13
Connections .....	14

### 2. DISASSEMBLY

2-1. Sub Panel Assy .....	18
2-2. MD Mechanism Block .....	18
2-3. Main Board, Digital Board .....	19
2-4. Heat Sink (REC) .....	19
2-5. MD Mechanism .....	20
2-6. Computer Board .....	20
2-7. Servo Board .....	21
2-8. Tension Spring (B) .....	21
2-9. Chassis (L), (R) Assy .....	22
2-10. Loading Motor Assy .....	22
2-11. Sled Motor Assy .....	23
2-12. Sensor Board .....	23
2-13. Spindle Motor Assy .....	24
2-14. Over Write Head .....	24
2-15. Optical Pick-up .....	25

### 3. DIAGRAMS

3-1. IC Pin Descriptions .....	26
3-2. Block Diagram –MD Section– .....	32
3-3. Block Diagram –Tuner Section– .....	33
3-4. Block Diagram –Display Section– .....	34
3-5. Circuit Boards Location .....	35
3-6. Printed Wiring Board –Servo Section– .....	36
3-7. Schematic Diagram –Servo Section (1/3)– .....	38
3-8. Schematic Diagram –Servo Section (2/3)– .....	39
3-9. Schematic Diagram –Servo Section (3/3)– .....	40
3-10. Printed Wiring Board –Sensor Section– .....	41
3-11. Schematic Diagram –Sensor Section– .....	41
3-12. Printed Wiring Board –Computer Section– .....	42
3-13. Schematic Diagram –Computer Section– .....	43
3-14. Printed Wiring Boards –Main Section– .....	44
3-15. Schematic Diagram –Main Section (1/4)– .....	46
3-16. Schematic Diagram –Main Section (2/4)– .....	47
3-17. Schematic Diagram –Main Section (3/4)– .....	48
3-18. Schematic Diagram –Main Section (4/4)– .....	49
3-19. Printed Wiring Board –Relay Section– .....	50
3-20. Schematic Diagram –Relay Section– .....	51
3-21. Printed Wiring Board –Key Section– .....	52
3-22. Schematic Diagram –Key Section– .....	53

### 4. EXPLODED VIEWS

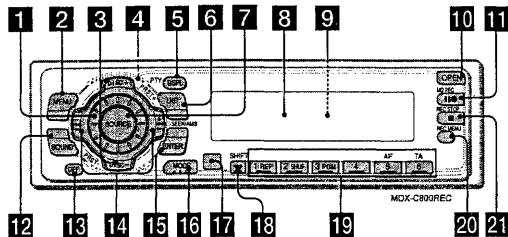
4-1. Sub Panel Section .....	59
4-2. Front Panel Section .....	60
4-3. Chassis Section .....	61
4-4. MD Mechanism Section (1) .....	62
4-5. MD Mechanism Section (2) .....	63
4-6. MD Mechanism Section (3) .....	64

### 5. ELECTRICAL PARTS LIST .....

# SECTION 1 GENERAL

This section is extracted from instruction manual.

## Location of controls



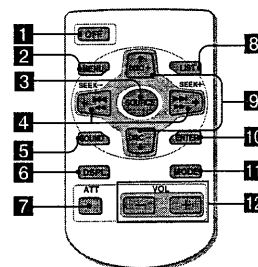
Refer to the pages listed for details.

- 1 Volume control dial 33
- 2 MENU button 8, 11, 13, 14, 15, 17, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 35, 37, 38, 40, 44
- 3 DISC/PRST +/- (cursor up/down) buttons 8, 11, 13, 14, 15, 17, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 35, 37, 38, 39, 40, 44  
During CD/MD playback:  
Disc change 11, 20  
During radio reception:  
Preset stations select 30, 37  
DAB select 36, 39
- 4 ▲ (eject) button (located on the front side of the unit behind the front panel) 9, 10
- 5 DSPL/PTY (display mode change/programme type) button 10, 11, 16, 22, 27, 31, 35, 40
- 6 LIST button 16  
List-up 17, 30, 39
- 7 SOURCE (Radio/CD/MD) button 7, 8, 9, 10, 11, 13, 17, 29, 30, 33, 36, 37, 44
- 8 Display window
- 9 Reset button (located on the front side of the unit behind the front panel) 7
- 10 OPEN button 7, 9, 10, 18, 19, 20, 21, 22, 45
- 11 MD REC button 18, 19, 20, 21, 22
- 12 SOUND button 43
- 13 OFF button\* 5, 7, 8, 10
- 14 SEEK/AMS +/- (cursor left/right) buttons 8, 11, 13, 14, 16, 23, 24, 25, 26, 27, 28, 30, 32, 33, 35, 38, 40, 43, 44  
Automatic Music Sensor 11, 18, 20  
Manual Search 11  
Seek 29, 30, 32, 36
- 15 ENTER button 8, 9, 11, 13, 14, 15, 16, 17, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 35, 37, 38, 39, 40, 44
- 16 MODE button 33  
During CD or MD playback:  
CD/MD unit select 10, 17  
During radio reception:  
Band select 29, 30, 36, 37
- 17 Receptor for the card remote commander
- 18 SHIFT button 31, 32, 33, 34
- 19 Number buttons  
During radio reception:  
Preset number select 29, 30, 32, 34, 37, 38  
During CD/MD playback:  
① REP 12, 22  
② SHUF 12, 22  
③ PGM 13  
④ AF 22, 31, 32, 33, 34  
⑤ TA 22, 32, 33, 34
- 20 REC MENU button 18, 19, 20, 21, 22
- 21 REC STOP button 19, 20, 21

\* Warning when installing in a car without ACC (accessory) position on the ignition switch  
Be sure to press (OFF) on the unit for 2 seconds to turn off the clock display after turning off the ignition.  
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery drain.

## Location of controls

### Card remote commander RM-X91 (optional)



The corresponding buttons of the card remote commander control the same functions as those on this unit.

- 1 OFF button
- 2 MENU button
- 3 SOURCE button
- 4 SEEK/AMS (+/-) buttons
- 5 SOUND button
- 6 DSPL/PTY button
- 7 ATT button
- 8 LIST button
- 9 DISC/PRST (+/-) buttons
- 10 ENTER button
- 11 MODE button
- 12 VOL buttons

### Notes

- A unit turned off by pressing (OFF) for 2 seconds cannot be operated with the card remote commander unless (SOURCE) on the unit is pressed, or a disc is inserted to activate the unit first.
- Do not leave the card remote commander where it can be exposed to direct sunlight such as on a dashboard or the steering wheel, etc. The card remote commander may be deformed by the heat.
- The MiniDisc recorder may not operate properly with the card remote commander in direct sunlight. In such a case, hold the card remote commander close to the unit's receptor.

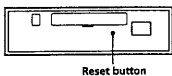
5

6

## Getting Started

### Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.  
Remove the front panel and press the reset button with a pointed object, such as a ball-point pen.



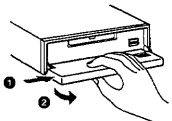
Reset button

Note  
Pressing the reset button will erase the clock setting and some stored contents.

### Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

- 1 Press (OFF).
- 2 Press (OPEN), then slide the front panel to the right side, and pull out the left side of the front panel.

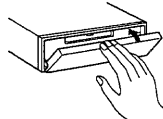
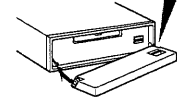
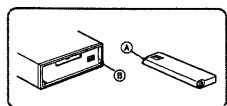


### Notes

- Do not put anything on the inner surface of the front panel.
- Be sure not to drop the panel when detaching it from the unit.
- If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.
- When carrying the front panel with you, use the supplied front panel case.

### Attaching the front panel

Place the hole (A) in the front panel onto the spindle (B) on the unit as illustrated, then push the left side in.



### Notes

- Be careful not to attach the front panel upside down.
- Do not press the front panel too hard against the unit when attaching it.
- Do not press too hard or put excessive pressure on the display window of the front panel.
- Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.

### Caution alarm

If you turn the ignition switch to the OFF position without removing the front panel, the caution alarm will beep for a few seconds.

7

## Turning the unit on/off

### Turning on the unit

Press (SOURCE) or insert an MD into the unit. For details on operation, refer to page 9 (MD/CD) and page 29 (radio).

### Turning off the unit

Press (OFF) to stop MD/CD playback or radio reception (the key illumination and display remain on).  
Press (OFF) for 2 seconds to completely turn off the unit.

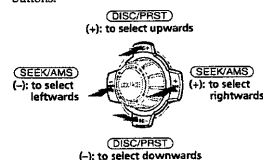
### Note

If your car has no ACC position on the ignition switch, be sure to turn the unit off by pressing (OFF) for 2 seconds to avoid car battery drain.

## How to use the menu

### — An introductory guide

One operational feature of this unit is selecting functions/settings from a menu. After entering Menu mode, you move the cursor to select each item with the following buttons:



### Note

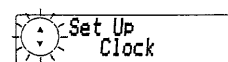
In Menu mode the "▲" in the left of the display indicates the selectable buttons of (DISC/PRST) and (SEEK/AMS).

## Setting the clock

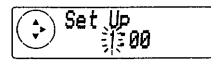
The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

- 1 Press (MENU), then press either side of (DISC/PRST) repeatedly until "Clock" appears.

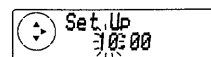


- 1 Press (ENTER).

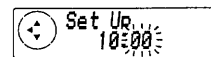


The hour indication flashes.

- 2 Press either side of (DISC/PRST) to set the hour.

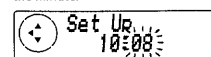


- 3 Press the (+) side of (SEEK/AMS).



The minute indication flashes.

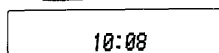
- 4 Press either side of (DISC/PRST) to set the minute.



8



- 2 Press **(ENTER)**.



The clock starts.

After the clock setting is completed, the display returns to normal play mode.

**Tip**  
You can set the clock automatically with the RDS feature (see page 35).

#### Notes

- If your car has no ACC (accessory) position on the ignition switch, be sure to turn on the unit before you set the clock (see page 8).
- In the initial setting, the clock indication appears while the unit is turned off.
- When D.INFO mode is set to ON, the time is always displayed (page 43).

## MD Player CD/MD Unit (optional)

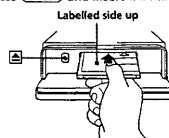
In addition to playing an MD with this unit alone, you can also control external CD/MD units.

**Note**  
If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear on the display when you play a CD TEXT disc.

## Playing a disc

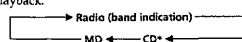
### Playing an MD (with this unit)

- 1 Press **(OPEN)** and insert the MD.



- 2 Close the front panel.  
Playback starts automatically.

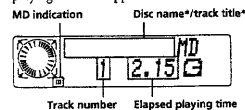
If an MD is already inserted, press **(SOURCE)** repeatedly until "MD" appears to start playback.



\* If the corresponding optional equipment is not connected, this item will not appear.

continue to next page →

The title of the MD\* and the track title\* will appear on the display window, then the playing time will appear.



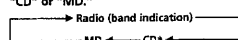
\* Only if these titles are prerecorded on the MD (Some characters cannot be displayed).

To	Press
Stop playback	<b>(OFF)</b>
Eject the MD	<b>(OPEN)</b> then <b>(EJECT)</b>

**Note**  
When the last track on the MD is over, the track number indication returns to "1," and playback restarts from the first track of the MD.  
With optional unit connected, the MD in MD unit 2 will be played from the beginning, after the MD in the main unit is played to the end.

### Playing a CD or MD (with optional CD/MD unit)

- 1 Press **(SOURCE)** repeatedly to select "CD" or "MD."

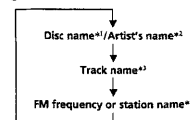


\* This item will not appear if the optional CD unit is not connected.

- 2 Press **(MODE)** until the desired unit appears.  
CD/MD playback starts.

## Changing the display item

Each time you press **(DISP/PTY)** during MD, CD, or CD TEXT disc playback, the item changes as follows:



\*1 If you have not labelled the CD or CD TEXT disc ("Labelling a CD" on page 15), or if there is no disc name prerecorded on the MD, "NO D.Name" appears on the display.

\*2 If you play a CD TEXT disc, the artist's name appears on the display after the disc name. (Only for CD TEXT discs with the artist's name.)

\*3 If the track name of a CD TEXT disc or MD is not prerecorded, "NO T.Name" appears on the display.

\*4 While the AFITA function is activated.

After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds. In the Motion Display mode, all the items are scrolled on the display one by one in order.

#### Notes

- If you use personalised labels, they will always take priority over the original CD TEXT information when such information is displayed.
- Some letters cannot be displayed during MD or CD TEXT playback.

**Tip**  
The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 43).

## Automatically scrolling a disc name

### — Auto Scroll

If the disc name, artist name, or track name on an MD or a CD TEXT disc exceeds 10 characters and the Auto Scroll function is on, information automatically scrolls across the display as follows:

- The disc name appears when the disc has changed (if the disc name is selected as the display item).
- The track name appears when the track has changed (if the track name is selected as the display item).
- The disc or track name appears depending on the setting when you press **(SOURCE)** to select an MD or CD TEXT disc.

If you press **(DISP/PTY)** to change the display item, the disc or track name of the MD or CD TEXT disc is scrolled automatically whether you set the function on or off.

- 1 During playback, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "A.Scl" appears.

- 3 Press the (+) side of **(SEEK/AMS)** to select "A.Scl on."

- 4 Press **(ENTER)**.

To cancel Auto Scroll, select "A.Scl off" in step 3.

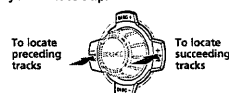
#### Note

For some CD TEXT discs with very many characters, the following cases may happen:  
— Some of the characters are not displayed.  
— The information does not scroll.

## Locating a specific track

### — Automatic Music Sensor (AMS)

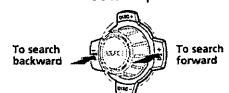
During playback, press either side of **(SEEK/AMS)** momentarily for each track you want to skip.



### Locating a specific point in a track

#### — Manual Search

During playback, press and hold either side of **(SEEK/AMS)**. Release when you have found the desired point.



#### Note

If "LL LL" or "RR RR" appears on the display, you have reached the beginning or the end of the disc and you cannot go any further.

## Locating a disc

### — Disc Selection

When an optional CD/MD unit is connected, press either side of **(DISC/PRST)** to select the desired disc. The desired disc on the current optional CD/MD unit begins playback.

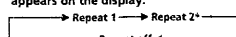
## Playing tracks repeatedly

### — Repeat Play

The MD in the main unit will automatically repeat itself when it reaches the end. As repeat play, you can select:

- Repeat 1 — to repeat a track.
- Repeat 2 — to repeat a disc in the optional CD/MD unit.

During playback, press **(REP)** repeatedly until the desired setting appears on the display.



\* "Repeat 2" is only available when you connect one or more optional MD units, or when you connect optional CD units.



Repeat Play starts.

To return to normal play mode, select "Repeat off."

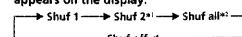
## Playing tracks in random order

### — Shuffle Play

You can select:

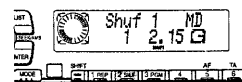
- Shuf 1 — to play the tracks on the current disc in random order.
- Shuf 2 — to play the tracks in the current optional CD/MD unit in random order.
- Shuf all — to play all the tracks in all the connected CD/MD units (including this unit) in random order.

During playback, press **(SHUF)** repeatedly until the desired setting appears on the display.



\*1 "Shuf 2" is only available when you connect one or more optional CD/MD units.

\*2 "Shuf all" is only available when you connect one or more optional MD units, or when you connect two or more optional CD units.



Shuffle Play starts.

To return to normal play mode, select "Shuf off."

## Creating a programme

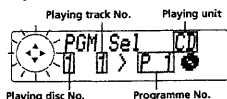
### — Programme Memory

You can choose your favourite tracks from an MD/CD on the main and connected CD/MD units, and create your own programme to play them in the order of your choice. The programme will be stored in the unit's memory. You can select up to 24 tracks for a programme and one programme per each unit with this function.

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "PGM Sel" appears.

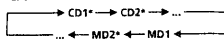
- 2 Press **(ENTER)**.

Programme edit mode



- 3 Select the track you want.

- 1 Press **(SOURCE)** repeatedly to select this unit ("MD" or "MD1") or optional CD/MD units.

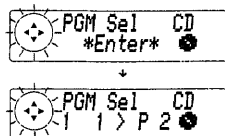


\* If the corresponding optional equipment is not connected, these items will not appear.

- 2 Press either side of **(DISC/PRST)** for more than 2 seconds until the desired disc appears.

- 3 Press either side of **(SEEKAMS)** repeatedly to select the track.

- 4 Press **(ENTER)** momentarily.



- 5 To continue entering tracks, repeat steps 3 and 4.

- 6 When you finish entering tracks, press **(MENU)** twice.

Notes

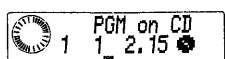
- "Wait" appears on the display while the unit is reading the data, or if a disc has not been inserted into the unit.
- "Mem FULL" appears on the display if you try to enter more than 24 tracks into a programme.
- Repeat play and shuffle play will be suspended until Programme Edit mode is over.

### Playing the stored programme

Changing the disc order on the CD/MD unit will not affect programme memory play.

During CD/MD playback, press **(P)** (PGM) to play the stored programme.

PGM on → PGM off



To return to normal play mode, select "PGM off."

Notes

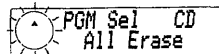
- "NO Data" appears on the display if no track is stored in the programme.
- If a track stored in programme memory is not on a disc in the magazine, the track will be skipped.
- If the discs in the magazine contain no tracks stored in programme memory, or if the programme information has not been loaded yet, "Not Ready" appears.

### Erasing an entire programme

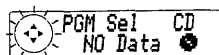
- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

- 3 Press the (-) side of **(DISC/PRST)** repeatedly until "All Erase" appears.



- 4 Press **(ENTER)** for 2 seconds.



The entire programme is erased.

- 5 Press **(MENU)** twice.

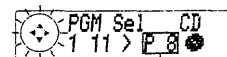
### Adding tracks to the programme

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

When adding a track to the end of a programme, skip step 3.

- 3 Press either side of **(DISC/PRST)** repeatedly to select the programme number where you want to insert a new track.



Programme No.

- 4 Press **(SEEKAMS)** to select the new track.

- 5 Press **(ENTER)**.

The selected track is inserted at that programme number, and the succeeding tracks are renumbered. To continue inserting tracks, repeat steps 3 to 5.

- 6 Press **(MENU)** twice.

Note

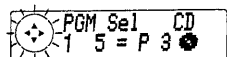
Once all 24 slots have been filled, "Mem FULL" appears on the display, and you cannot insert more tracks.

### Erasing tracks in a programme

- 1 During CD/MD playback, press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "PGM Sel" appears.

- 2 Press **(ENTER)**.

- 3 Press either side of **(DISC/PRST)** repeatedly to select the programme number with the track you want to erase.



- 4 Press **(ENTER)** for 2 seconds.

The selected track is erased, and the succeeding tracks are renumbered.

- 5 Press **(MENU)** twice.

### Labelling a CD — Disc Memo

(For a CD unit with the CUSTOM FILE function)

You can label each disc with a personalised name. You can enter up to 8 characters for a disc. If you label a CD, you can locate the disc by name (page 17).

- 1 Start playing the disc you want to label.

- 2 Press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "Name Edit" appears.

- 3 Press **(ENTER)**.

Name Edit mode

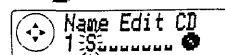


The unit will repeat the disc during the labelling procedure.

- 4 Enter the characters.

- 1 Press the (+) side of **(DISC/PRST)** repeatedly to select the desired characters.

(A → B → C → ... Z → 0 → 1 → 2 → ... 9 → \* → / → \ → > → < → . → )



If you press the (-) side of **(DISC/PRST)** repeatedly, the characters will appear in reverse order.

If you want to put a blank space between characters, select **( )**.

continue to next page →

- 2 Press the (+) side of **(SEEKAMS)** after locating the desired character.



If you press the (-) side of **(SEEKAMS)**, you can move back to the left.

- 3 Repeat steps 1 and 2 to enter the entire name.

- 5 To return to normal CD play mode, press **(ENTER)**.

Tips

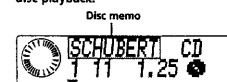
- To erase or correct a name, enter **( )** for each character.
- There is another way to start labelling a CD: Press **(LIST)** for 2 seconds instead of performing steps 2 and 3. You can also complete the operation by pressing **(LIST)** for 2 seconds instead of step 5.
- You can label CDs on a unit without the CUSTOM FILE function if that unit is connected along with a CD unit that has the function. The disc name will be stored in the memory of the CD unit with the CUSTOM FILE function.

Note

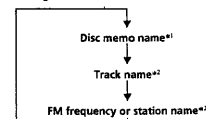
Repeat play, shuffle play, and programme play will be suspended until Name Edit mode is over.

### Displaying the disc memo

Press **(DISP/PTY)** during CD or CD TEXT disc playback.



Each time you press **(DISP/PTY)** during CD or CD TEXT disc playback, the item changes as follows:



<sup>1</sup> If you use personalised labels, they will always take priority over the original CD TEXT information when such information is displayed.

<sup>2</sup> If you connect an optional CD unit with the CD TEXT function, the CD TEXT information will appear on the display when you play a CD TEXT disc.

<sup>3</sup> While the AFITA function is activated.

Note

Some letters cannot be displayed during MD or CD TEXT disc playback.

## Erasing the disc memo

- 1 Press **(SOURCE)** repeatedly to select "CD."
- 2 Press **(MODE)** repeatedly to select the CD unit with the CUSTOM FILE function.
- 3 Press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "Name Del" appears.
- 4 Press **(ENTER)**.  
The stored names will appear from the earliest entered ones.
- 5 Press either side of **(DISC/PRST)** repeatedly to select the disc name you want to erase.  
The stored names will appear from the earliest ones entered.
- 6 Press **(ENTER)** for 2 seconds.  
The name is erased.  
Repeat steps 5 and 6 if you want to erase other names.
- 7 Press **(MENU)** twice.  
The unit returns to normal CD play mode.

### Notes

- To erase the disc memo, play a CD on the CD unit in which the disc memo you want to erase is stored.
- When a personalised label for a CD TEXT disc is erased, the original CD TEXT information will appear on the display.

## Locating a disc by name

— List-up (For a CD unit with the CD TEXT function/CUSTOM FILE function, or an MD unit)

You can use this function for discs that have been assigned custom names or for CD TEXT discs.  
You can locate the disc by  
— its custom name when you assign a name for a CD or an MD using a CD unit with the CUSTOM FILE function or an MD unit.  
(For information on disc names, see "Labelling a CD" and "Labelling an MD" on pages 15 and 26).  
— the CD TEXT information: when you play a CD TEXT disc on a CD unit with the CD TEXT function.

- 1 Press **(LIST)**.  
The name assigned to the current disc appears on the display.



- 2 Press either side of **(DISC/PRST)** repeatedly until you find the desired disc.

- 3 Press **(ENTER)** to play the disc.

### Notes

- When using the card remote commander, press **(LIST)** to return to normal play mode. When operating just by the unit's button, the display returns to normal play mode after 5 seconds.
- The track names are not displayed during MD or CD TEXT disc playback.
- If there are no discs on the CD/MD unit, "NO Disc" appears on the display.
- If a disc has not been assigned a custom name, "\*\*\*\*\*" appears on the display.
- If you use personalised labels, they will always take priority over the original CD TEXT information when such information is displayed.
- Some letters cannot be displayed during MD or CD TEXT disc playback.
- If the disc information has not been read yet by the unit, "P" is displayed.

## Recording on an MD

You can record individual tracks/discs or programmed tracks played on a connected CD/MD unit onto the MD on this unit. You can also record a radio programme with the "Time Machine recording" feature.

### Notes on recording

- When the whole playback time of the CD/MD is longer than the remaining recordable time of the MD, recording will stop when the recordable MD becomes full.
- A recording may fail if there is too much difference in temperature between the unit and the MD.
- Recorded sound may drop out if you perform recording while the unit is subject to excessive vibration (such as when driving on a rough road, etc.).
- Once you finish recording on or editing the MD, be sure to eject the MD before you turn off the ignition or disconnect the power-supply leads of the unit.
- Editing and recording are completed when the unit updates the TOC (Table of Contents) information and then the MD is ejected. The lamp located at the bottom of the MD slot flashes during updating of the TOC information.
- You cannot perform the following operations during recording or recording stand-by:
  - selecting another track
  - selecting another radio programme\*
  - ejecting an MD
  - labelling an MD
  - selecting Menu mode.
- Unselectable only during recording
- "Protected" appears when the tab for record-protection is open.
- Repeat play, shuffle play, and programme play will be cancelled when **(MD/REC)** is pressed.
- The **(3)** (AF) and **(3)** (TA) buttons do not work during recording.

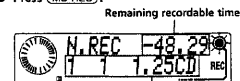
### Tip

The unit automatically locates the end of the MD's recorded section and starts to record from that point.

## Recording from a CD or MD by the track

— Track recording

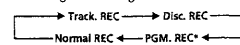
- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 9.)
- 2 Play the CD or MD from which you want to record.
- 3 Press **(MD REC)**.



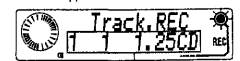
Information of the playing CD

The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) lit in amber.

- 4 Press **(REC MENU)** repeatedly until "Track REC" appears.  
Each time you press **(REC MENU)**, recording mode changes as follows:



\* If you did not create a programme, this item will not appear.

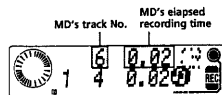


Information of the playing CD

If you want the actual recording to start from the point on the track where you press **(MD REC)** next, select "Normal REC" in this step.

- 5 Press either side of **(SEEK/AMS)** repeatedly to select the track you want to record.

- 6 Press **(MD REC)** again to start recording.



The unit locates the beginning of the selected track and starts recording. Then "●" stops flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) light in red.

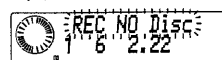
When the recording of the track is completed, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

### Inserting the MD to record upon afterwards

You can still start recording even if a CD or MD in the connected CD/MD unit is already playing and an MD is yet to be inserted into this MD recorder.

- 1 Press **(MD REC)**.
- 2 Insert an MD while "REC NO Disc" is displayed (within 10 seconds after step 1).



- 3 Press **(REC MENU)** repeatedly until "Track REC" appears.

- 4 Press **(MD REC)** again to start recording.

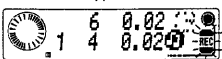
### Note

Be sure to insert an MD while "REC NO Disc" is displayed. If the indication disappears, recording stand-by is cancelled.

## Continuing recording after turning the ignition off

— REC Continue mode

- 1 Press **(OPEN)** and insert the MD to be recorded on.
- 2 Play the CD or MD from which you want to record.
- 3 Press **(MD REC)**.
- 4 Press **(REC MENU)** repeatedly to select "Disc REC," "Track REC," or "PGM. REC."
- 5 Press **(MD REC)** again to start recording.
- 6 Press **(REC MENU)** repeatedly until "Continue on" appears.



Recording continue indication

- 7 Turn the ignition off and detach the front panel before you leave the car.  
During REC Continue mode, the unit keeps beeping to indicate the state of the unit, and stops beeping when recording is completed. When you turn the ignition to the ACC position and attach the front panel again, "REC Complete" appears on the display if recording is completed successfully.

### Notes

- Frequent use of REC Continue mode feature may cause battery drain. Make sure that the battery is well charged.
- Be sure not to start the engine of the car again during REC Continue mode. Recording may fail.

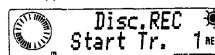
## Recording a whole CD or MD — Disc recording

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 9.)

- 2 Play the CD or MD from which you want to record.

- 3 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) lit in amber.

- 4 Press **(REC MENU)** repeatedly until "Disc REC" appears.



- 5 Press either side of **(DISC/PRST)** repeatedly to select the disc from which you want to record.

- 6 Press either side of **(SEEK/AMS)** repeatedly to select the track from which you want to start recording.  
If you want to record the whole disc, be sure to choose the first track.

- 7 Press **(MD REC)** again to start recording.  
The recording starts from the beginning of the currently playing track. Then "●" stops flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) light in red.

When the recording of all the following tracks are over, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

### Tip

You can continue recording even after turning off the ignition to leave the car (see "Continuing recording after turning the ignition off" on page 19).

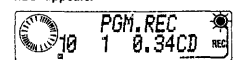
## Recording from a CD or MD in a specific track order

— Programme recording

You must have a programme created to use this function.  
(See "Creating a programme" on page 13.)

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 9.)
- 2 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) lit in amber.

- 3 Press **(REC MENU)** repeatedly until "PGM. REC" appears.



- 4 Press **(MD REC)** again to start recording.  
The unit locates the beginning of the selected programme and starts recording. Then "●" stops flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) light in red.

When the recording of the programme is completed, the unit beeps and automatically stands by for further recording while the CD or MD continues to play.

To cancel the recording or recording stand-by, press **(REC STOP)**.

#### Notes

- If you did not create a programme, "PGM. REC" will not appear in step 3.
- If you created a programme that includes the MD to play on this recorder, "Not Ready" appears in step 3. In such a case, you must erase such tracks from the programme.

#### Tip

You can continue the recording even after turning off the ignition to leave the car (see "Continuing recording after turning the ignition off" on page 19).

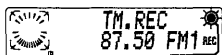
## Recording a radio programme

### — Time Machine recording

When recording from a radio broadcast, the first few seconds of material are often lost because of the time it takes you to ascertain the contents and press the buttons. To prevent this loss of material, the "Time Machine recording" feature constantly stores a maximum of 10 seconds of the most recent audio data in buffer memory. When you start recording a radio programme, the recording actually starts with the 10 seconds of audio data stored in buffer memory in advance. You can also record without the prestored 10 seconds as well.

- 1 Press **(OPEN)** and insert the MD to be recorded on.  
(See "Playing a disc" on page 9.)
- 2 Tune in the desired station (page 30).
- 3 Press **(MD REC)**.  
The unit stands by for recording with "●" flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) lit in amber.

- 4 Press **(REC MENU)** repeatedly until "TM. REC" appears.



If you want actual recording to start from the point on the programme where you press **(MD REC)** next, select "Normal REC" in this step.

- 5 Press **(MD REC)** again to start recording.  
The unit starts recording with the 10 seconds of audio data stored in advance in buffer memory.  
Then "●" stops flashing and the buttons for recording (**(MD REC)**, **(REC STOP)**, and **(REC MENU)**) light in red.

To pause the recording, press **(MD REC)**.

To cancel the recording or recording stand-by, press **(REC STOP)**.

#### Notes

- If you pause radio recording, a track number is recorded at that point.
- You cannot tune in another station during recording. Pause recording before attempting to tune in another station.
- You cannot activate TA function during recording (radio programme). You cannot start recording a radio programme while TA function is activated as well.

## Using a timer to stop recording

### — Timer-off recording

You can set a timer so the unit will continue recording the radio programme after you turn off the ignition and leave the car.

- 1 Press **(OPEN)** and insert the MD to be recorded on.
- 2 Tune in the desired station (page 30).
- 3 Press **(MD REC)**.
- 4 Press **(MD REC)** again to start recording.
- 5 Press **(REC MENU)** repeatedly until your desired recording time appears.  
Each time you press **(REC MENU)**, recording time increases, in increments of 10 minutes.

→ 10 → 20 → ... → 80 → off

During Timer-off recording, the unit keeps beeping to indicate the state of the unit and stops beeping when the recording is completed. When you turn the ignition to the ACC position and attach the front panel again, "REC Complete!" appears on the display if the recording is completed successfully.

#### Notes

- Be sure not to start the engine of your car again during Timer-off recording. Recording may fail.
- Frequent use of the Timer-off recording feature may cause battery drain. Make sure that the battery is well charged.
- The power aerial remains extended during Timer-off recording. (The aerial retracts when the recording is over.)
- The sound of the radio will be recorded on the MD as you hear it during reception (including any noise, distortion, and missing sound).
- When the optional DAB tuner unit XT-100DAB is connected: you cannot record DAB programmes with Timer-off recording feature. In such a case, consult your nearest Sony dealer.

## Editing an MD

By using the editing functions described below, you can create your own original MD albums.

### Caution

Do not edit the MD while driving, as it diverts your attention from the road.

#### Notes on editing

- "Protected" appears if the tab for record-protection is open.
- Once you finish recording on or editing the MD, be sure to eject the MD before you turn off the ignition or disconnect the power-supply leads of the unit. Editing and recording are completed when the unit updates the TOC (Table of Contents) information and then the MD is ejected. The lamp located at the bottom of the MD slot flashes during updating of the TOC information.
- The **(REP)**, **(SHUF)**, **(PGM)**, **(AF)**, **(TA)** and **(BSP)** buttons do not work during edit mode.

## Erasing a recording

### — Erase function

You can erase a single track or all tracks at once. You can erase a portion of a track as well.

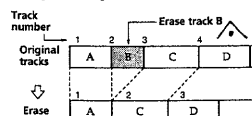
#### Note

You cannot restore an erased track. Be sure to confirm the selected track or tracks before erasing.

### Erasing a single track

You can erase a track simply by specifying its track number. When you erase a track, the total number of tracks on the MD decreases by one, and all the tracks following the erased one are renumbered.

Example: Erasing track B.

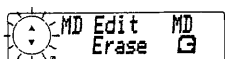


21

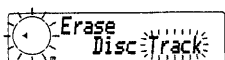
22

- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISCPRST)** repeatedly until "Erase" appears.



- 3 Press **(ENTER)**.



- 4 While "Track" is flashing, press **(ENTER)** to select track erase.

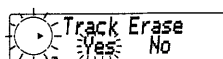
- 5 Select the track.  
① Press either side of **(SEEK/AMS)** repeatedly to select the track.



Selected track No.

- ② Press **(ENTER)**.

- 6 Erase the track.  
① Press the (-) side of **(SEEK/AMS)** to select "Yes."



To cancel selection of this track and return to step 5, select "No" in this step.

- ② Press **(ENTER)**.  
"Complete!" appears, and the selected track is erased.

- 7 To continue erasing tracks, repeat steps 5 and 6.

- 8 Press **(MENU)** twice.

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 6.

### Erasing all tracks

You can erase the disc name and all recorded tracks, and their titles all at once.

- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISCPRST)** repeatedly until "Erase" appears.

- 3 Press **(ENTER)**.

- 4 Select disc erase.  
① Press the (-) side of **(SEEK/AMS)** to select "Disc."



- ② Press **(ENTER)**.

- 5 Erase all tracks.  
① Press the (-) side of **(SEEK/AMS)** to select "Yes."



To cancel erasing, select "No" in this step.

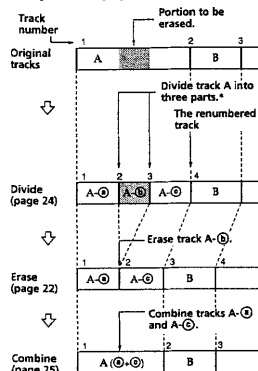
- ② Press **(ENTER)**.  
"Complete!" appears, and all tracks are erased. The source changes to the next available source.

To cancel the erasing procedure altogether, press **(MENU)** twice anywhere before step 5.

### Erasing a portion of a track

By using the Divide (see page 24), Erase (see page 22), and Combine (see page 25) functions, you can erase specific portions of a track.

Example: Erasing a portion of track A.



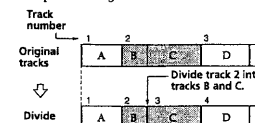
\* The tracks are renumbered.

## Dividing recorded tracks

### — Divide function

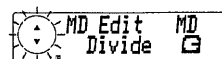
You can use this function to add track numbers to divide any multiple tracks that are recorded as one track. This function also lets you mark track numbers after recording ends. The total number of tracks increases by one, and all subsequent tracks are renumbered.

Example: Dividing track 2 into tracks B and C.



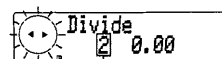
- 1 While playing an MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISCPRST)** repeatedly until "Divide" appears.



- 3 Press **(ENTER)**.

- 4 Press either side of **(SEEK/AMS)** repeatedly to select the track you want to divide.



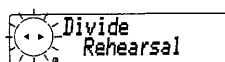
Selected track number

23

24



- 5 Press **(ENTER)** to mark the dividing point.  
The unit repeatedly plays the next few seconds after the marked point.



- 6 Press either side of **(SEEK/AMS)** to fine-tune the dividing point.

- 7 While monitoring the track, press **(ENTER)** at the point where you want to divide.  
"Complete!" appears, and the selected track is divided.

- 8 To continue dividing tracks, repeat steps 4 to 7.

- 9 Press **(MENU)** twice.

To cancel the dividing procedure altogether, press **(MENU)** twice anywhere before step 7.

#### Notes

- The name applied to the original track will become the label for the first new track of the divided track, and the second one will not be labelled.
- "Impossible" appears if the unit cannot divide a track any more because the MD has been edited too many times. This is due to the system limitation of MDs and is not a malfunction of the unit.

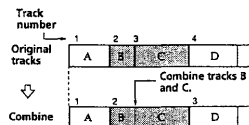
**Tip**  
To combine the divided tracks again, use the Combine function (see page 25).

## Combining recorded tracks

— Combine function

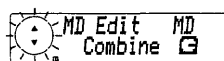
This function lets you put several tracks or several independently recorded portions together into a single track. The total number of tracks decreases by one, and all subsequent tracks are renumbered.

Example: Combining tracks B and C.



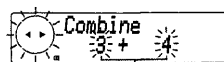
- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Combine" appears.



- 3 Press **(ENTER)**.

- 4 Press either side of **(SEEK/AMS)** repeatedly to select the set of tracks you want to combine.



- 5 Press **(ENTER)** to combine the tracks.  
"Complete!" appears, and the selected tracks are combined.

- 6 To continue combining tracks, repeat steps 4 and 5.

- 7 Press **(MENU)** twice.

To cancel the combining procedure, press **(MENU)** twice anywhere before step 5.

#### Notes

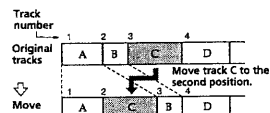
- The name applied to the first of the original tracks will be labelled on the combined track.
- "Impossible" appears if the unit cannot combine the tracks because the MD has been edited too many times. This is due to the system limitation of MDs and is not a malfunction of the unit.

## Moving recorded tracks

— Move function

Using the Move function, you can change the order of the tracks recorded on an MD. When you move tracks, the tracks are automatically renumbered.

Example: Moving track C to position 2.



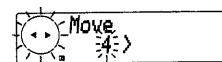
- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Move" appears.



- 3 Press **(ENTER)**.

- 4 Select the track you want to move.  
1 Press either side of **(SEEK/AMS)** repeatedly to select the track.



Selected track No.

- 2 Press **(ENTER)**.

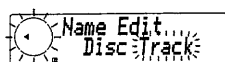
25

26

- 2 Press either side of **(DISC/PRST)** repeatedly until "Name Edit" appears.



- 3 Press **(ENTER)**.



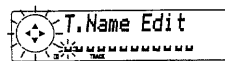
- 4 While "Track" is flashing, press **(ENTER)** to select track name edit.

- 5 Press either side of **(SEEK/AMS)** repeatedly to select the track you want to label.



Selected track No.

- 6 Press **(ENTER)**.

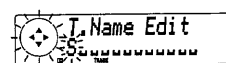


The unit will repeat the track during the labelling procedure.

- 7 Enter the characters.

- 1 Press the (+) side of **(DISC/PRST)** to select desired character.

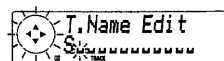
A → B → C → ... x → y → z  
... # → ← 1 → ... 2 → 1 → 0



If you press the (-) side of **(DISC/PRST)** repeatedly, the characters will appear in reverse order.  
Each time you press **(DISC/PRST)**, the character type changes as follows:  
A → a → 0 → A

If you want to put a blank space between characters, select " ".

- 2 Press the (+) side of **(SEEK/AMS)** after locating a desired character.



If you press the (-) side of **(SEEK/AMS)**, you can move back to the left.

- 3 Repeat steps 1 and 2 to enter the entire title.

- 8 Press **(ENTER)**.  
"Complete!" appears, and the selected title is registered.

- 9 Press **(MENU)** twice.

To cancel the labelling procedure, press **(MENU)** twice anywhere before step 8.

#### Labelling an MD

After step 3, press the (-) side of **(SEEK/AMS)** to select disc name edit, and go to step 6.



The unit will repeat the disc during the labelling procedure.

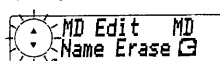
#### Changing the label

Overwrite the desired track/disc name as described in "Labelling a track" and "Labelling an MD."

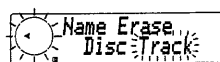
#### Erasing a track name

- 1 While playing the MD you want to edit, press **(MENU)**.

- 2 Press either side of **(DISC/PRST)** repeatedly until "Name Erase" appears.



- 3 Press **(ENTER)**.



- 4 While "Track" is flashing, press **(ENTER)** to select track name erase.

- 5 Select the track whose name you want to erase.

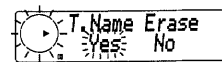
- 1 Press either side of **(SEEK/AMS)** repeatedly to select the track whose name you want to erase.



Selected track No.

- 2 Press **(ENTER)**.

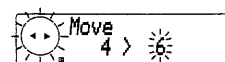
- 6 Erase the name.  
1 Press the (-) side of **(SEEK/AMS)** to select "Yes."



To cancel selection of this track name and return to step 5, select "No" in this step.

- 2 Press **(ENTER)**.  
"Complete!" appears, and the selected track name is erased.

- 5 Select the track number to which you want to move the track.  
1 Press either side of **(SEEK/AMS)** repeatedly to select the track number.



Selected new track No.

- 2 Press **(ENTER)** to move the track.  
"Complete!" appears, and the selected track is moved.

- 6 To continue moving tracks, repeat steps 4 and 5.

- 7 Press **(MENU)** twice.

To cancel the moving procedure, press **(MENU)** twice anywhere before step 5.

## Labelling an MD

You can label your recorded MDs and tracks. You can enter up to 1,700 characters as labels per disc (disc title and track title included).

**Note**  
The **(REP)** and **(SHUF)** buttons do not work during Name Edit mode.

#### Labelling a track

- 1 While playing the MD you want to edit, press **(MENU)**.

27

28

## Radio

### Storing stations automatically

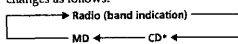
#### — Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and stores them in the order of their frequency. You can store up to 6 stations of each band (FM1, FM2, FM3, MW, and LW).

#### Caution

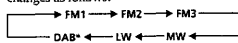
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

- 1 Press **[SOURCE]** repeatedly to select the radio.  
Each time you press **[SOURCE]**, the source changes as follows:



\* If the corresponding optional equipment is not connected, this item will not appear.

- 2 Press **[MODE]** repeatedly to select the band.  
Each time you press **[MODE]**, the band changes as follows:



\* This item is displayed only if the optional DAB tuner (XT-100DAB) is connected.

- 3 Press **[MENU]**, then press either side of **[DISC/PST]** repeatedly until "BTM" appears.

- 4 Press **[ENTER]**.  
The unit stores stations in the order of their frequency on the number buttons.  
A beep sounds when the setting is stored.

#### Notes

- The unit does not store stations with weak signals. If only a few stations can be received, some number buttons will retain their former settings.
- When a number is indicated on the display, the unit starts storing stations from the one currently displayed.
- If an MD is not in the unit, only the radio band appears, even if you press **[SOURCE]**.

### Storing only the desired stations

You can preset up to 18 FM stations (6 each for FM1, FM2, and FM3), up to 6 MW stations, and up to 6 LW stations in the order of your choice.

- 1 Press **[SOURCE]** repeatedly to select the radio.
- 2 Press **[MODE]** repeatedly to select the band.
- 3 Press either side of **[SEEK/AMS]** to tune in the station that you want to store on the number button.
- 4 Press the desired number button (1 to 6) for 2 seconds until "Memory" appears.  
The number button indication appears on the display.

**Note**  
If you try to store another station on the same number button, the previously stored station will be erased.

### Receiving the stored stations

- 1 Press **[SOURCE]** repeatedly to select the radio.
- 2 Press **[MODE]** repeatedly to select the band.
- 3 Press the number button (1 to 6) on which the desired station is stored.

#### Tip

Press either side of **[DISC/PST]** to receive the stations in the order they are stored in the memory (Preset Search function).

#### If you cannot tune in a preset station

Press either side of **[SEEK/AMS]** to search for the station (automatic tuning).  
Scanning stops when the unit receives a station. Press either side of **[SEEK/AMS]** repeatedly until the desired station is received.

#### Note

If the automatic tuning stops too frequently, press **[MENU]**, then press either side of **[DISC/PST]** repeatedly until "Local off" is displayed. Then press the (+) side of **[SEEK/AMS]** to select "Local on" (Local Seek mode). Press **[ENTER]**.  
Only the stations with relatively strong signals will be tuned in.

#### Tips

- When you select the "Local on" setting, "LCL Seek" appears while the unit is searching for a station.
- If you know the frequency of the station you want to listen to, press and hold either side of **[SEEK/AMS]** until the desired frequency appears (manual tuning).

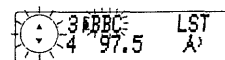
### If FM stereo reception is poor — Monaural Mode

- 1 During FM radio reception, press **[MENU]**, then press either side of **[DISC/PST]** repeatedly until "Mono off" appears.
- 2 Press the (+) side of **[SEEK/AMS]** until "Mono on" appears.  
The sound improves, but becomes monaural ("ST" disappears).
- 3 Press **[ENTER]**.

To return to normal mode, select "Mono off" in step 2.

### Locating a station by name — List-up

- 1 During radio reception, press **[LIST]** momentarily.  
The name assigned to the station currently tuned in flashes.



- 2 Press either side of **[DISC/PST]** repeatedly until you find the desired station.  
If no name is assigned to the selected station, the frequency appears on the display.
- 3 Press **[ENTER]** to tune in the desired station.

#### Note

When using the card remote commander, press **[LIST]** to return to normal play mode. When operating just by the unit's button, the display returns to normal play mode after 5 seconds.

## RDS

### Overview of the RDS function

Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio programme signal. Your car stereo offers you a variety of services. Here are just a few: retuning the same programme automatically, listening to traffic announcements, and locating a station by programme type.

#### Notes

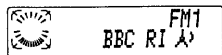
- Depending on the country or region, not all of the RDS functions are available.
- RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.

### Displaying the station name

The name of the current station appears in the display.

#### Select an FM station (page 30).

When you tune in an FM station that transmits RDS data, the station name appears on the display.



#### Changing the displayed item

Each time you press **[DISP/PTY]**, the item changes as follows:

Station Name (Frequency) ↔ Programme type

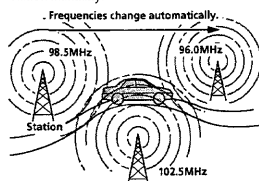
After you select the desired item, the display will automatically change to the Motion Display mode after a few seconds.  
In the Motion Display mode, all the items are scrolled in the display one by one in order.

#### Tip

The Motion Display mode can be turned off. (See "Changing the sound and display settings" on page 43.)

### Retuning the same programme automatically — Alternative Frequencies (AF)

The Alternative Frequencies (AF) function automatically selects and retunes the station with the strongest signal in a network. By using this function, you can continuously listen to the same programme during a long-distance drive without having to retune the station manually.



- 1 Select an FM station (page 30).

- 2 Press **[SHIFT]**.

- 3 Press **[AF]** repeatedly until "AF on" appears.  
The unit starts searching for an alternative station with a stronger signal in the same network.

- 4 Press **[SHIFT]**.

#### Notes

- When there is no alternative station in the area and you do not need to search for an alternative station, turn the AF function off by pressing **[AF]** repeatedly until "AF off" appears in step 3.
- When "NO AF" and the station name flash alternately, it means that the unit cannot find an alternative station in the network.
- If the station name starts flashing after selecting a station with the AF function on, this indicates that no alternative frequency is available. Press either side of **[SEEK/AMS]** while the station name is flashing (within 8 seconds). The unit starts searching for another frequency with the same PI (Programme Identification) data ("PI Seek" appears and no sound is heard). If the unit cannot find another frequency, "NO PI" appears, and the unit returns to the previously selected frequency.
- If you want to change the on/off setting while you are playing a CD or an MD, press **[AF]** directly without pressing **[SHIFT]**.

#### Listening to a regional programme

The "REG on" (regional on) function lets you stay tuned to a regional programme without being switched to another regional station. (Note that you must turn the AF function on.) The unit is factory-set to "REG on," but if you want to turn off the function, do the following.

- 1 During radio reception, press **[MENU]**, then press either side of **[DISC/PST]** repeatedly until "REG on" appears.

- 2 Press the (+) side of **[SEEK/AMS]** until "REG off" appears.

- 3 Press **[ENTER]**.  
Note that selecting "REG off" might cause the unit to switch to another regional station within the same network.

To return to regional on, select "REG on" in step 2.

#### Note

This function does not work in the United Kingdom and in some other areas.

### Local Link function (United Kingdom only)

The Local Link function lets you select other local stations in the area, even if they are not stored on your number buttons.

- 1 Press a number button (1 to 6) that has a local station stored on it.
- 2 Within 5 seconds, press the number button of the local station again.
- 3 Repeat this procedure until the desired local station is received.

### Listening to traffic announcements

The Traffic Announcement (TA) and Traffic Programme (TP) data lets you automatically tune in an FM station that is broadcasting traffic announcements even if you are listening to other programme sources.

- 1 Press **[SHIFT]**.
- 2 Press **[TA]** repeatedly until "TA on" appears.  
The unit starts searching for traffic information stations. "TP" appears on the display when the unit finds a station broadcasting traffic announcements.  
When the traffic announcement starts, "TA" flashes. The flashing stops when the traffic announcement is over.
- 3 Press **[SHIFT]**.

#### Tip

If the traffic announcement starts while you are listening to another programme source, the unit automatically switches to the announcement and goes back to the original source when the announcement is over.



#### Notes

- "NO TP" flashes for 5 seconds if the received station does not broadcast traffic announcements. Then, the unit starts searching for a station that broadcasts it.
- If you want to change the on/off setting while you are playing a CD or an MD, press **(T)** directly without pressing **(SHIFT)**.

#### To cancel the current traffic announcement

Press **(T)**.  
To cancel all traffic announcements, press **(SHIFT)**, and turn off the function by pressing **(T)** until "TA off" appears. Press **(SHIFT)** to return to normal mode.

**Tip**  
You can also cancel the current announcement by pressing **(SOURCE)** or **(MODE)**.

#### Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements beforehand so you won't miss the announcement. When a traffic announcement starts, the volume will be automatically adjusted to the preset level.

- 1 Press **(SHIFT)**.
- 2 Press **(T)** for 2 seconds. "TA" appears and the setting is stored.
- 3 Turn the volume control dial to adjust the desired volume level.
- 4 Press **(SHIFT)**.

#### Receiving emergency announcements

If an emergency announcement comes in while you are listening to the radio, the programme will be automatically switched to it ("AF" flashes while receiving the announcement). If you are listening to a source other than the radio, the emergency announcements will be heard if you turn the AF or TA function on. The unit will then automatically switch to these announcements no matter which source you are listening to at the time.

### Presetting the RDS stations with the AF and TA data

When you preset RDS stations, the unit stores each station's data as well as its frequency, so you don't have to turn on the AF or TA function every time you tune in the preset station. You can select a different setting (AF, TA, or both) for individual preset stations, or the same setting for all preset stations.

#### Presetting the same setting for all preset stations

- 1 Select an FM band (page 29).
- 2 Press **(SHIFT)**.
- 3 Press **(S)** (AF) and/or **(E)** (TA) to select "AF on" and/or "TA on."  
Note that selecting "AF off" or "TA off" stores not only RDS stations, but also non-RDS stations.
- 4 Press **(SHIFT)**.
- 5 Press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "BTM" appears.
- 6 Press the (+) side of **(SEEK/AMS)** until "BTM" flashes.
- 7 Press **(ENTER)**.

#### Presetting different settings for each preset station

- 1 Select an FM band, and tune in the desired station (page 30).
- 2 Press **(SHIFT)**.
- 3 Press **(S)** (AF) and/or **(E)** (TA) to select "AF on" and/or "TA on."
- 4 Press **(SHIFT)**.
- 5 Press the desired number button (1 to 6) until "Memory" appears. Repeat from step 1 to preset other stations.

**Tip**  
If you want to change the preset AF and/or TA setting after selecting a preset station, you can do so by turning the AF or TA function on or off.

**Note**  
If you want to change the AF/TA setting while you are playing a CD or an MD, press **(S)** (AF) or **(E)** (TA) directly without pressing **(SHIFT)**.

### Locating a station by programme type

You can locate the station you want by selecting the programme type.

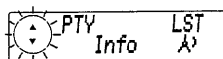
Programme types	Display
News	News
Current Affairs	Affairs
Information	Info
Sports	Sport
Education	Educate
Drama	Drama
Culture	Culture
Science	Science
Varied	Varied
Popular Music	Pop M
Rock Music	Rock M
Easy Listening	Easy M
Light Classical	Light M
Classical	Classics
Other Music Type	Other M
Weather	Weather
Finance	Finance
Children's Programmes	Children
Social Affairs	Social A
Religion	Religion
Phone In	Phone In
Travel	Travel
Leisure	Leisure
Jazz Music	Jazz
Country Music	Country
National Music	Nation M
Oldies Music	Oldies
Folk Music	Folk M
Documentary	Document

**Note**  
You cannot use this function in some countries where no PTY (Programme Type selection) data is available.

33

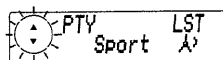
34

- 1 Press **(DISC/PRST)** during FM reception until "PTY" appears.



The current programme type name appears if the station is transmitting the PTY data. "-----" appears if the received station is not an RDS station, or if the RDS data has not been received.

- 2 Press **(DISC/PRST)** repeatedly until the desired programme type appears. The programme types appear in the order shown in the table.



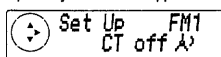
"-----" appears if the programme type is not specified in the RDS data.

- 3 Press **(ENTER)**.  
The unit starts searching for a station broadcasting the selected programme type.

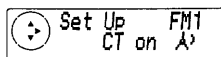
### Setting the clock automatically

The CT (Clock Time) data from the RDS transmission sets the clock automatically.

- 1 During radio reception, press **(MENU)**, then press either side of **(DISC/PRST)** repeatedly until "CT off" appears.



- 2 Press the (+) side of **(SEEK/AMS)** repeatedly until "CT on" appears. The clock is set.



- 3 Press **(ENTER)** to return to the normal display.

#### To cancel the CT function

Select "CT off" in step 2.

#### Notes

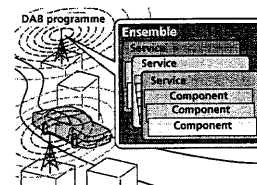
- The CT function may not work even though an RDS station is being received.
- There might be a difference between the time set by the CT function and the actual time.



### Overview of DAB

DAB (Digital Audio Broadcasting) is a new multimedia broadcasting system that transmits audio programmes with a quality comparable to that of CDs. This is made possible by the use of a microcomputer in the DAB tuner which uses the radio signals sent from multiple aerials and multi-path signals (reflected radio waves) to boost the strength of the main signal. This makes DAB almost immune to radio interference even in a moving object such as a car.

Each DAB station bundles radio programmes (services) into an ensemble which it then broadcasts. Each service contains one or more components. All ensembles, services, and components are identified by name, so you can access any of them without having to know their frequencies.



**Notes**

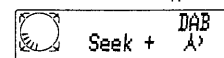
- The DAB system is actually in a testing phase. This means some services have not been sufficiently defined or are presently being tested. At present, such services are not supported by the optional DAB tuner unit XT-100DAB.
- DAB programmes are broadcast in Band-III (174 to 240 MHz) and L-Band (1,452 to 1,452 MHz), with each band divided into channels (41 in Band-III and 23 in L-Band). One ensemble is broadcast per channel by each DAB station.

### Basic operations of DAB

#### Searching for the ensemble and service

— Automatic Tuning

- 1 Press **(SOURCE)** repeatedly to select the radio.
- 2 Press **(MODE)** repeatedly to select "DAB."
- 3 Press and hold either side of **(SEEK/AMS)** until "Seek +" or "Seek -" appears.



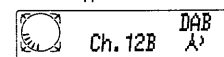
- 4 Press either side of **(SEEK/AMS)** to search the desired service.

#### Selecting the ensemble

— Manual Tuning

If you know the channel number of ensemble, follow the procedure below to tune in.

- 1 Press **(SOURCE)** repeatedly to select the radio.
- 2 Press **(MODE)** repeatedly to select "DAB."
- 3 Press either side of **(DISC/PRST)** until "Ch. XXX" appears.



35

36

- 4 Press either side of **(DISC/PRST)** repeatedly until the desired channel number appears.

**Tip**  
More than one channel broadcast the same ensemble.

#### Receiving the memorised services

Following procedure is available after presetting the service. For details on presetting the services, refer to "Presetting DAB services automatically," and "Presetting DAB services manually" (pages 37 and 38).

- 1 Press **(SOURCE)** repeatedly to select the radio.
- 2 Press **(MODE)** repeatedly to select "DAB."
- 3 Press either side of **(DISC/PRST)** repeatedly to select the preset service.

**Tip**  
There is another way to receive the preset service (preset on numbers 1 to 6). Press the number button (1 to 6) on which the desired service is stored.

### Presetting DAB services automatically — BTM

The BTM (Best Tuning Memory) function picks out DAB ensembles and automatically assigns the services within the ensembles to preset service numbers. The unit can preset up to 40 services. If services have been previously set, the BTM function operates under the following conditions:

- If you activate the BTM function while listening to a preset service, the unit will store detected services (by overwriting) only to preset numbers higher than that of the current preset service.
- If you activate the function while listening to a service that is not preset, the unit will replace the contents of all preset numbers.
- In both cases above, if the unit detects a service that is identical to one already preset, the previously stored service remains unchanged and the newly detected service is not preset.

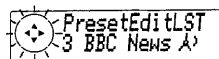
- 1 While listening to a DAB programme, press **(MENU)**.
- 2 Press either side of **(DISC/PRST)** repeatedly until "BTM" appears.
- 3 Press **(ENTER)**.  
A beep sounds when the service is stored. After activating the BTM function, the unit tunes the service assigned in the preset memory 1 automatically.

**Note**  
If the unit can only tune in a few services, the BTM function may not assign services to all the preset service numbers.

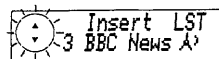
### Presetting DAB services manually — Manual Preset Memory

You can also preset DAB services manually or delete a service which is already preset. Note that up to 40 services (preset either by the BTM function or manually) can be preset to the unit's memory.

- 1 While listening to a DAB programme, press **(MENU)**.
- 2 Press either side of **(DISC/PRST)** repeatedly until "PresetEdit" appears, then press **(ENTER)**.
- 3 Select the service and the preset number you want to preset.
  - 1 Press either side of **(SEEK/AMS)** to select the service.



- 2 Press either side of **(DISC/PRST)** to select the preset number.
- 3 Press **(ENTER)**.



- 4 Press either side of **(DISC/PRST)** to select "Over Wrt." Each time you press (-) side of **(DISC/PRST)**, the edit command changes as follows:  
Insert\* → Delete → Over Wrt → Insert\*  
\* "Insert" does not appear if the maximum number of services (40) is already preset in memory.  
To preset other services, repeat steps 3 and 4.
- 5 Press **(ENTER)**.

#### Replacing the services in preset memories

Press either side of **(DISC/PRST)** to select "Over Wrt" in step 4, then press **(ENTER)**.

#### Adding the services in preset memories

Press either side of **(DISC/PRST)** to select "Insert" in step 4, then press **(ENTER)**.

#### Erasing the services in preset memories

Press either side of **(DISC/PRST)** to select "Delete" in step 4, then press **(ENTER)**.

**Tip**  
There is another way to preset the service (on numbers 1 to 6). After receiving the service, press the desired number button (1 to 6) until a beep sounds.

37

38

### Listening to a DAB programme

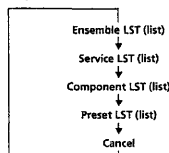
Follow the procedure below to tune in a DAB programme manually. You can also store DAB services in the unit's memory for instant tuning (see "Presetting DAB services automatically" on page 37).

- 1 While listening to a DAB programme, press **(LIST)** repeatedly until the Ensemble List appears.
- 2 Press either side of **(DISC/PRST)** until the desired ensemble appears, then press **(ENTER)**.
- 3 Press **(LIST)** repeatedly to until the Service List appears.
- 4 Press either side of **(DISC/PRST)** repeatedly until the desired service appears, then press **(ENTER)**.
- 5 Press **(LIST)** repeatedly until the Component List appears.
- 6 Press either side of **(DISC/PRST)** until the desired component appears, then press **(ENTER)**.

**Tip**  
To check the name of the current component, ensemble or service, press **(LIST)** repeatedly until the respective list appears on the display. The name of the currently selected item flashes.

#### Changing the display item

When you press **(LIST)** once, the list selected last time appears. Each time you press **(LIST)**, the list changes as follows:



#### Automatic updating of the ensemble list

When you perform the BTM function for the first time, all the ensembles available in your area are automatically stored. When you perform the BTM function again, the contents of these lists are updated in accordance with the conditions described on page 37. An ensemble is added to the respective list when it is received during Automatic Tuning or Manual Tuning but is unlisted.

- An ensemble is also deleted from the respective list when:
- you select an ensemble from the list, but it cannot be received.
  - you perform Automatic Tuning or Manual Tuning to receive a listed ensemble, service, or the component, but it cannot be received.

39

### Settings on the audio reception

DAB can contain multi-channel audio. You can select main or sub-channel for reception. Also, if you turn on the DRC (Dynamic Range Control) function, the dynamic range on the service which supports DRC can automatically be extended.

- The following items can be set:
- Main/Sub — to select the channel from either "Main" (main-channel) or "Sub" (sub-channel).
  - DRC — to turn on or off the function.

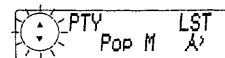
- 1 While listening to a DAB programme, press **(MENU)**.
- 2 Press either side of **(DISC/PRST)** repeatedly until "DRC" or "Main (or Sub)" appears.
- 3 Press either side of **(SEEK/AMS)** to select the desired setting (Example: "on" or "off").
- 4 Press **(ENTER)**.

**Note**  
"Main (or Sub)" appears in the menu only when the unit is receiving a multi-channel programme.

### Locating a DAB service by programme type (PTY)

You can use the PTY (Programme type selection) function to tune in the programme you want.

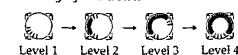
- 1 While listening to a DAB programme, press **(DISP/PTY)**.
- 2 Press either side of **(DISC/PRST)** repeatedly to select the programme type.



The programme types appear in the order shown on page 34.

- 3 Press **(ENTER)**.

**Tip**  
Refer to the level indication to check the receiving condition of the DAB programme. The level indication increases as the strength of the receiving signal increases.



**Note**  
To display the level indication, turn off the motion display (page 43).

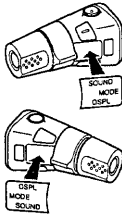
40

## Other Functions

You can also control the unit with a rotary commander (optional).

### Labelling the rotary commander

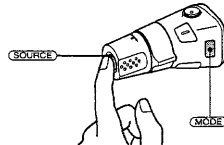
Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.



### Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls. You can also control optional CD/MD units with the rotary commander.

#### By pressing buttons (the SOURCE and MODE buttons)



Each time you press **(SOURCE)**, the source changes as follows:

Radio → CD\* → MD → Radio

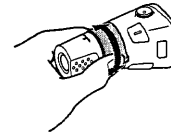
\* If the corresponding optional equipment is not connected, this item will not appear.

Pressing **(MODE)** changes the operation in the following ways:

- Radio: FM1 → FM2 → FM3 → MW → LW → DAB\* → FM1
- CD unit\*: CD1 → CD2 → ... → CD1
- MD unit\*: MD1 → MD2 → ... → MD1

\* If the corresponding optional equipment is not connected, these items will not appear.

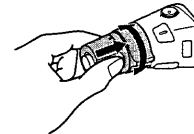
#### By rotating the control (the SEEK/AMS control)



Rotate the control momentarily and release it to:

- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

#### By pushing in and rotating the control (the PRESET/DISC control)

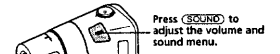
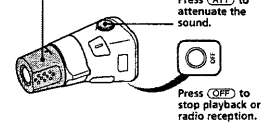


Push in and rotate the control to:

- Receive the stations stored on the number buttons.
- Change the disc\*.
- When an optional CD/MD unit is connected.

#### Other operations

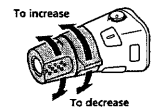
Rotate the VOL control to adjust the volume.



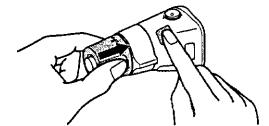
**Note**  
If your car has no ACC (accessory) position on the ignition switch, be sure to press **(OFF)** for 2 seconds to turn off the clock indication after turning off the ignition.

#### Changing the operative direction

The operative direction of controls is factory-set as shown below.



If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



Press **(SOUND)** for 2 seconds while pushing the VOL control.

**Tip**  
You can also change the operative direction of these controls with the unit. See "Changing the sound and display settings" on page 43.

## Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader. You can store the bass and treble levels independently for each source.

- 1 Select the item you want to adjust by pressing **(SOUND)** repeatedly. Each time you press **(SOUND)**, the item changes as follows:  
Bass → Treble → Balance (left-right) → Fader (front-rear)

- 2 Adjust the selected item by pressing either side of **(SEEK/AMS)**. When adjusting with the rotary commander, press **(SOUND)** and rotate the VOL control.

**Note**  
Adjust within 3 seconds after selecting the item.

## Quickly attenuating the sound

(With the rotary commander or the card remote commander)

Press **(ATT)** on the rotary commander or card remote commander. "ATT on" appears on the display momentarily.

To restore the previous volume level, press **(ATT)** again.

**Tip**  
When the interface cable of a car telephone is connected to the ATT lead, the unit decreases the volume automatically when a telephone call comes in (Telephone ATT function).

## Changing the sound and display settings

The following items can be set:

#### Set Up

- Clock (page 8)
- CT (Clock Time) (page 35)
- Beep — to turn the beeps on or off.
- RM (Rotary Commander) — to change the operative direction of the controls of the rotary commander.
- Select "norm" to use the rotary commander as the factory-set position.
- Select "rev" when you mount the rotary commander on the right side of the steering column.
- English/Español/Portugues/Svenska — to change the display language.

#### Display

- D.info (Dual Information) — to display the clock and the play mode at the same time (on).
- SA (Spectrum Analyzer) — to change the display pattern of the equalizer display.
- Amber/Green — to change the illumination color to amber or green.
- Dimmer — to change the brightness of the display.
- Select "Auto" to dim the display only when you turn the lights on.
- Select "on" to dim the display.
- Select "off" to deactivate the Dimmer.
- Contrast — to adjust the contrast if the indications on the display are not recognisable because of the unit's installation position.
- M.Displ (Motion Display) — to turn the motion display on or off.
- A.Scr (Auto Scroll) (page 11)

#### Sound

- Loud (Loudness) — to enjoy bass and treble even at low volumes. The bass and treble will be reinforced.

- 1 Press **(MENU)**.
- 2 Press either side of **(DISC/PRST)** repeatedly until the desired item appears. Each time you press the (-) side of **(DISC/PRST)**, the item changes as follows:  
**Example:**  
Clock → CT → Beep → RM → English/Español/Portugues/Svenska → D.info → SA → Amber/Green → Dimmer → Contrast → M.Displ → A.Scr\* → Loud
- 3 Press the (+) side of **(SEEK/AMS)** to select the desired setting (Example: on or off).
- 4 Press **(ENTER)**. After the mode setting is completed, the display returns to normal play mode.

**Note**  
The displayed item will differ depending on the source.

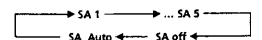
**Tip**  
You can easily switch among categories ("Set Up," "Display," "Sound," "Play Mode," and "Edit Mode") by pressing either side of **(DISC/PRST)** for 2 seconds.

## Selecting the spectrum analyzer

The sound signal level is displayed on a spectrum analyzer. You can select a display pattern from 1 to 5, or the automatic display mode.

Mode	Display pattern
SA 1	
SA 2	
SA 3	
SA 4	
SA 5	
off	Cancel
SA Auto	All of these display patterns appear one by one automatically.

- 1 Press **(SOURCE)** to select a source (radio, CD, or MD).
- 2 Press **(MENU)**.
- 3 Press either side of **(DISC/PRST)** repeatedly until "SA" appears.
- 4 Press either side of **(SEEK/AMS)** repeatedly to select the desired setting. Each time you press (+) side of **(SEEK/AMS)**, the setting changes as follows:



- 5 Press **(ENTER)**.

**Notes**

- \* If you select the "M.Displ 1" or "M.Displ 2" setting, the spectrum analyzer will not be displayed.
- \* If you select the "SA 1" or "SA 2" setting, the disc name and track name will not be displayed.
- \* If you select the "SA 3" or "SA 4" setting, source indication will not be displayed.

# Connections

## Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord ⑨ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all ground wires to a common ground point.
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

## Notes of connection example

### Notes on the control and power supply leads

- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency) or TA (Traffic Announcement) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has built-in FM/MW/LW aerial in the rear/side glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

### Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑨ may damage the aerial.

### Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

### Notes on speaker connection

- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 Ω, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

### Warning when installing in a car without ACC (accessory) position on the ignition switch

Be sure to press **OFF** on the unit for 2 seconds to turn off the clock display after turning off the ignition. When you press **OFF** only momentarily, the clock display does not turn off and this causes battery drain.

# Conexiones

## Precauciones

- Esta unidad ha sido diseñada para alimentarse con CC 12 V, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los raffles del asiento, etc.
- Conecte el cable de conexión de alimentación ⑨ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- Conecte todos los conductores de puesta a masa a un punto común.
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

## Notas de ejemplo de conexiones

### Notas sobre los cables de control y de suministro de alimentación

- El conductor (azul) de control de la antena motorizada suministra +12 V al encender el sintonizador o al activar la función AF (Frecuencias alternativas) o TA (Anuncios de tráfico).
- Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
- Si el automóvil dispone de una antena de FM/MW/LW incorporada en el cristal trasero/lateral, será necesario conectar el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.

### Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑨ suministrado puede dañar la antena.

### Conexión para protección de la memoria

Si conecta el conductor de entrada amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

### Notas sobre la conexión de los altavoces

- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
- Utilice altavoces con una impedancia de 4 a 8 Ω, y con la potencia máxima ajustable adecuada, ya que de lo contrario podría dañarlos.
- No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.
- No intente conectar los altavoces en paralelo.
- No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciera, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

**Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (auxiliar) en el interruptor de la llave de encendido**  
Asegúrese de pulsar **OFF** en la unidad durante 2 segundos para desactivar la indicación del reloj después de apagar el encendido. Si pulsa **OFF** sólo momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

# Anslutning

## Säkerhetsföreskrifter

- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller att de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln ⑨ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- Öra samtliga jordledningar till en och samma jordningspunkt.
- Anslut den gula kabeln till en ledig bilkets med en högre ampere än enheten. Om du seriekopplar enheten till andra stereokomponenter måste den bilkets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkets med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkets finns för anslutning till enheten ska du ansluta enheten till en bilkets med en högre ampere än enhetens styrka så att inga andra säkringar går om enhetens säkring smälter.

## Att observera angående anslutningsexemplen

### Ledningarna för styrning och strömförsörjning

- Motorantennens styrkabel (blå) leder +12 V DC när du slår på radion och när du aktiverar någon av funktionerna AF (alternativ frekvens) eller TA (trafikmeddelanden).
- En motorantenn utan styrreläbox kan inte anslutas till denna bilstereo.
- Om bilen har en FM/MW/LW-antenn inbyggd i bak- eller sidorutan måste du ansluta motorantennens styrkabel (blå) eller strömkabeln för tillbehör (röd) till strömterminalen på den befintliga antennförstärkaren. Din återförsäljare kan ge dig mer information om detta.

### Varning

Om du har en motorantenn utan reläbox kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑨.

### Anslutning för minnestöd

När du anslutit den gula, ingående strömkabeln-försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

### Att observera angående högtalarnas anslutning

- Slå av bilstereon innan du ansluter högtalarna.
- Anslut endast högtalare, vars impedans varierar från 4 till 8 Ω och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.
- Anslut inte något av högtalarna till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.
- Anslut inte högtalarna parallellt.
- Anslut inte aktiva högtalare (med inbyggda slutslog) till bilstereons högtalartuttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.

### Var försiktig när du gör installationen i en bil vars tändningslås saknar tillbehörsåge (ACC)

Göm inte att stänga av klockan genom att trycka på **OFF** på enheten under 2 sekunder sedan du har slagit av tändningen. Om du bara trycker på **OFF** ett kort ögonblick klockan inte klockans teckenfönster, vilket leder till att batteriet laddas ur.

# Ligações

## Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem entalados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho nem entre as peças móveis como, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente ⑨ ao aparelho e aos altifalantes antes de o ligar ao conector de corrente auxiliar.
- Ligue todos os fios de terra a um ponto de massa comum.
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja tensão seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a tensão do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma das tensões dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma tensão tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho reventar os fusíveis respectivos, nenhum outro circuito seja cortado.

## Notas sobre o exemplo de ligação

### Notas sobre os fios de controlo e o cabo de alimentação

- O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar a função AF (Frequência alternativa) ou TA (Informações sobre o trânsito).
- Com este aparelho, não pode utilizar uma antena eléctrica sem relé.
- Se o automóvel tiver uma antena FM/MW/LW integrada no vidro traseiro/lateral, é necessário ligar o fio de controlo da antena eléctrica (azul) ou o cabo de alimentação para acessórios (vermelho) ao terminal eléctrico do amplificador de sinal de antena existente. Para mais informações, consulte o seu agente.

### Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com o cabo de alimentação ⑨ fornecido, pode provocar danos na antena.

### Ligação para alimentação contínua da memória

Quando o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

### Notas sobre a ligação dos altifalantes

- Antes de ligar os altifalantes, desligue o aparelho.
- Utilize altifalantes com impedância de 4 a 8 Ω e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.
- Não ligue os terminais do sistema de altifalantes ao chassi do automóvel e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.
- Não tente ligar os altifalantes em paralelo.
- Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Se o fizer, pode avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar os altifalantes passivos a estes terminais.

**Aviso referente à instalação num automóvel sem posição ACC (acessórios) na chave de ignição**  
Depois de desligar a ignição, carregue em **OFF** no aparelho durante 2 segundos para desactivar o visor do relógio. Se carregar rapidamente em **OFF**, o visor do relógio não se apaga o que provoca o desgaste da bateria.

# Подсоединение

## Предостережения

- Данная автомагнитола предназначена для подключения только к 12-вольтовому аккумулятору постоянного тока с заземлением минус на массу.
- Следите за тем, чтобы не защемить какие-либо провода между винтом и корпусом автомагнитолы или магнитолы либо между подвижными частями в салоне автомобиля, например, передними сиденьями и металлическими направляющими рейками под ним.
- Подсоедините шнур питания ⑨ сначала к магнитоле и громкоговорителям, а уже потом - к контактам внешнего источника питания.
- Подведите все провода заземления к одной и той же точке заземления.
- Подсоедините желтый провод к свободной электроцепи автомобиля с большей силой тока чем та, на которую рассчитан предохранитель магнитолы. Если Вы подсоедините эту магнитолу в сочетании с другими компонентами стереосистемы, сила тока в электроцепи автомобиля, к которой они подключаются, должна быть больше суммы значений силы тока, на которую рассчитаны предохранители отдельных компонентов. В случае отсутствия в автомобиле контура со столь же высокой силой тока, как та, на которую рассчитан предохранитель магнитолы, подсоедините магнитолу напрямую к аккумулятору. В случае если в автомобиле нет свободных электроцепей для подсоединения магнитолы, подсоедините ее к автоэлектроцепи с силой тока выше того значения, на которое рассчитан предохранитель магнитолы, таким образом, чтобы если он перегорит, другие цепи не прервались.

## Примечания к примеру подсоединения

### Примечания к проводам управления и электропитания

- По (синему) проводу питания антенны с электрическим приводом осуществляется подача постоянного тока напряжением +12 вольт при включении Батей радиоприемника или задерживании функций AF (альтернативные частоты) или TA (дорожные сообщения).
- Электроприводная антенна, не оснащенная релевым блоком, с данной магнитолой использоваться не может.
- В случае если Ваш автомобиль оснащен УКВ/СВ/ДВ антенной, встроенной в заднее/боковое стекло, необходимо подсоединить провод управления электроприводной антенны (синий) или дополнительный провод подводки электропитания (красный) к гнезду питания на автомобильном усилителе.

### Предостережение

Если Вы используете электроприводную антенну без релевого блока, подсоединение данной магнитолы посредством прилагаемого шнура питания ⑨ может привести к повреждению антенны.

**Подсоединение для поддержки памяти**  
Когда к магнитолу подсоединят желтый электрический провод, блок памяти будет постоянно получать питание, даже при выключенном зажигании.

### О подсоединении громкоговорителей

- Прежде чем подсоединить громкоговорители, выключите магнитолу.
- Используйте громкоговорители с полным сопротивлением 4-8 Ω, обладающие способностью принимать достаточно мощный сигнал. В противном случае они могут быть повреждены.
- Не подсоединяйте контактные гнезда громкоговорителей к шасси автомобиля и не соединяйте гнезда правого громкоговорителя с гнездами левого.
- Не пытайтесь подсоединить громкоговорители параллельно.
- Не подсоединяйте к гнездам для громкоговорителей на магнитоле какие бы то ни было активные громкоговорители (со встроенными усилителями), поскольку это может привести к повреждению последних.
- Убедитесь в том, что подсоединяемые громкоговорители относятся к пассивному типу.

**Соблюдайте осторожность, выполняя установку в автомобиле, в котором нет положения ACC (принудительности) в замке зажигания**  
Обязательно нажимайте кнопку **OFF** на аппарате в течение 2 секунд, чтобы отключить индикацию времени после выключения зажигания. При слишком кратком нажатии **OFF** циферблат не отключается, что ведет к разрядке аккумуляторной батареи.



## Connection diagram

## Diagrama de conexiones

## Kopplingsschema

## Diagrama de ligações

## Схема подсоединения

Equipment used in illustrations  
(not supplied)

Front speaker  
Altavoz delantero  
Förre högtalare  
Altifalante dianteiro  
Передний громкоговоритель



Equipo utilizado en las ilustraciones  
(no suministrado)

Rear speaker  
Altavoz trasero  
Bakre högtalare  
Altifalante traseiro  
Задний громкоговоритель



Utrustning som visas i illustrationer  
(medföljer inte)

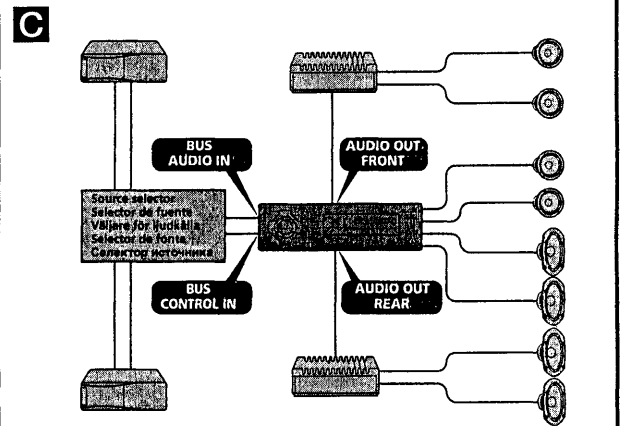
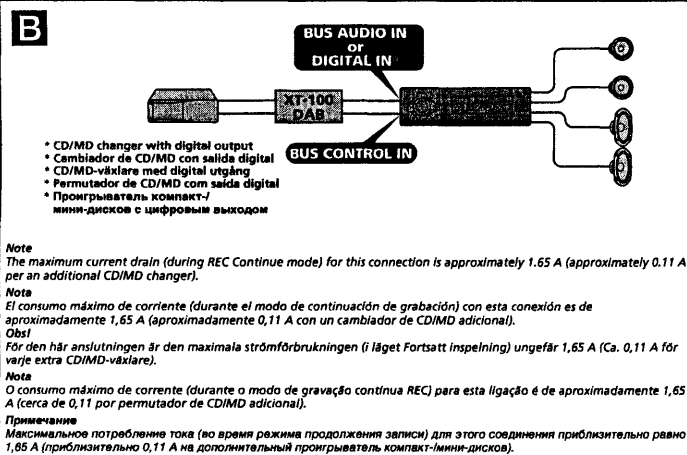
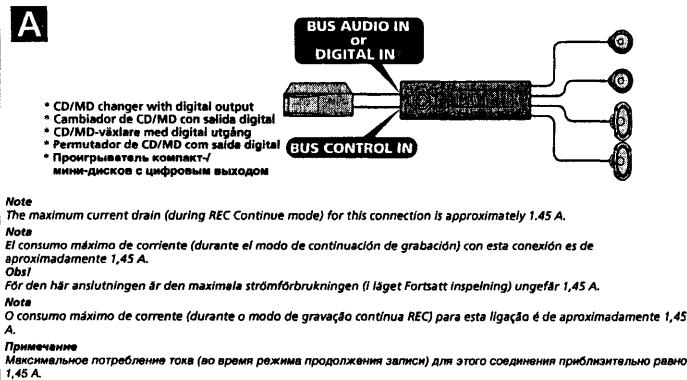


Equipamento utilizado nas  
ilustrações (não fornecido)

Power amplifier  
Amplificador de potencia  
Effektförstärkare  
Amplificador de potência  
Усилитель



CD/MD changer  
Cambiador de CD/MD  
CD/MD-skivväxlare  
Permutador de CD/MD  
Проигрыватель CD/MD



## Connection example

\*1 Note for the aerial connecting  
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor (9) to connect it.

First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.

\*2 RCA pin cord (not supplied)

\*3 For digital connection

\*4 For analog connection

\*5 Be sure to set the DIGITAL/ANALOG switch on the CD/MD unit to the appropriate position and press the reset button on this MiniDisc Recorder after connection.

## Ejemplo de conexiones

\*1 Nota sobre la conexión de la antena  
Si la antena del automóvil es del tipo ISO (International Organisation for Standardisation), emplee el adaptador suministrado (9) para conectarla.

En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.

\*2 Cable con clavijas RCA (no suministrado)

\*3 Para conexión digital

\*4 Para conexión analógica

\*5 Asegúrese de ajustar el interruptor DIGITAL/ANALOG de la unidad de CD/MD en la posición adecuada y de pulsar el botón de reposición de esta grabadora de MiniDisc tras la conexión.

## Anslutningarna enligt exemplet

\*1 Angående antennanslutning  
Om motorantennen är av ISO-typ (International Organisation for Standardisation), använd du medföljande adapter (9) för att ansluta den.

Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.

\*2 Kabel med RCA-kontakter (medföljer inte)

\*3 För digital anslutning

\*4 För analog anslutning

\*5 Se till att du ställer omkopplaren DIGITAL/ANALOG på CD/MD-enheten i rätt läge och att du efter anslutningen trycker på den här MiniDisc-spelarens återställningsknapp.

## Exemplo de ligações

\*1 Nota referente à ligação de antena  
Se a antena do automóvel for uma antena de tipo ISO (International Organisation for Standardisation), utilize o adaptador fornecido (9) para fazer a ligação respectiva.

Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.

\*2 Cabo de terminais RCA (não fornecido)

\*3 Para ligação digital

\*4 Para ligação analógica

\*5 Coloque o selector DIGITAL/ANALOG do dispositivo de CD/MD na posição adequada e carregue no botão de reinitialização do gravador de MiniDisc depois de fazer a ligação.

## Пример подсоединения

\*1 Примечание о подсоединении антенны  
Если антенна в Вашем автомобиле относится к типу, утвержденному ISO (Международной организацией по стандартизации), используйте для ее подсоединения переходник (9).

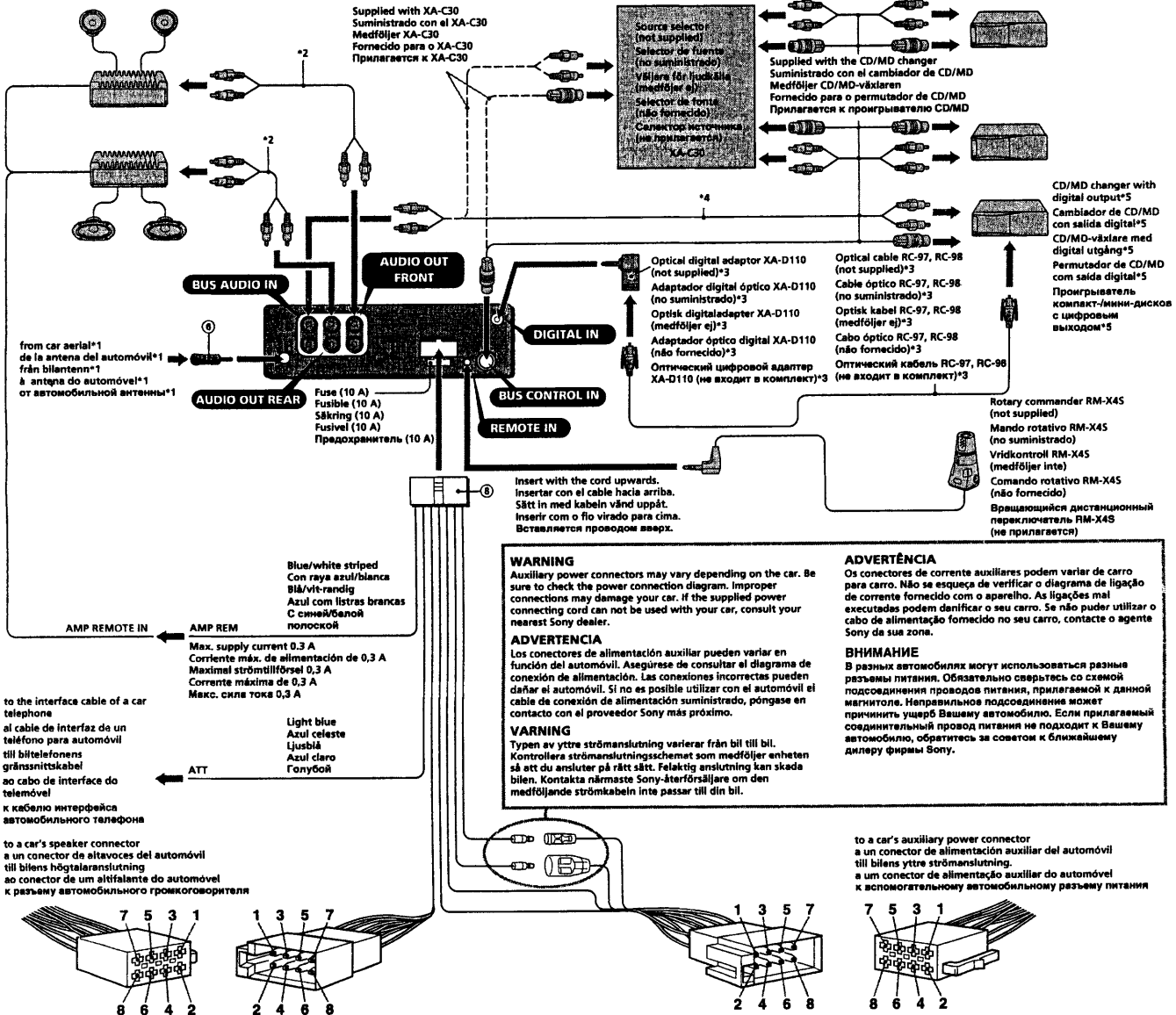
Сначала подсоедините автомобильную антенну к прилагаемому переходнику, а затем - к антенному гнезду магнитолы.

\*2 Шнур с контактными штырьками RCA (не прилагается)

\*3 Для цифрового соединения

\*4 Для аналогового соединения

\*5 Обязательно установите переключатель DIGITAL/ANALOG на устройстве для компакт-мини-дисков в соответствующее положение и нажмите кнопку сброса не записывающем устройстве мини-дисков после подсоединения.



**WARNING**  
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

**ADVERTENCIA**  
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

**VARNING**  
Typer av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

**ADVERTÊNCIA**  
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

**ВНИМАНИЕ**  
В разных автомобилях могут использоваться разные разъемы питания. Обязательно сверьтесь со схемой подсоединения проводов питания, прилагаемой к данной магнитоле. Неправильное подсоединение может причинить ущерб Вашему автомобилю. Если прилагаемый соединительный провод питания не подходит к Вашему автомобилю, обратитесь за советом к ближайшему дилеру фирмы Sony.

Color	Speaker, Rear, Right	Speaker, Front, Left
Purple Púrpura Violetto Фиолетовый	Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Громкоговоритель, передний, левый
White Blanco Vite Белый	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Громкоговоритель, передний, левый
Grey Gris Grá Cinzentos Серый	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo Громкоговоритель, передний, левый

Negative polarity positions 2, 4, 6, and 8 have striped cords.  
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con rayas.  
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.  
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.  
Позиции отрицательной полярности 2, 4, 6 и 8 имеют провода с полосками.

Color	Power supply	Color	Power supply
Yellow Amarelo Gul Amarelo Желтый	continuous power supply suministro de alimentación continua kontinuierlig strömförsörjning alimentação de corrente continua непрерывное поступление питания	Red Rojo Röd Vermelho Красный	switched power supply suministro conmutado de alimentación switched strömförsörjning alimentação de corrente comutada включаемое питание
Blue Azul Blå Azul Синий	power aerial control control de antena motorizada styrning av motorantenn antena eléctrica управление приводом антенны	Black Negro Svart Preto Черный	ground masa jord Terra земля
Orange/White Naranja/Blanco Orange/vit Cor de laranja/branco Оранжевый/белый	switched illumination power supply fuente de alimentación de iluminación conmutada Switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação подача питания подсветки от зажигания		

Positions 1, 2 and 3 do not have pins.  
Las posiciones 1, 2 y 3 no disponen de clavijas.  
Positionerna 1, 2 och 3 saknar stift.  
As posições 1, 2 e 3 não têm pinos.  
Позиции 1, 2 и 3 не имеют контактных штырьков.



## Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord. After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

## Diagrama de conexión de alimentación

El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coinciden correctamente. Existen tres tipos básicos (ilustrados a continuación). Es posible que sea necesario cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil. Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referentes a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

## Strömanslutningsschema

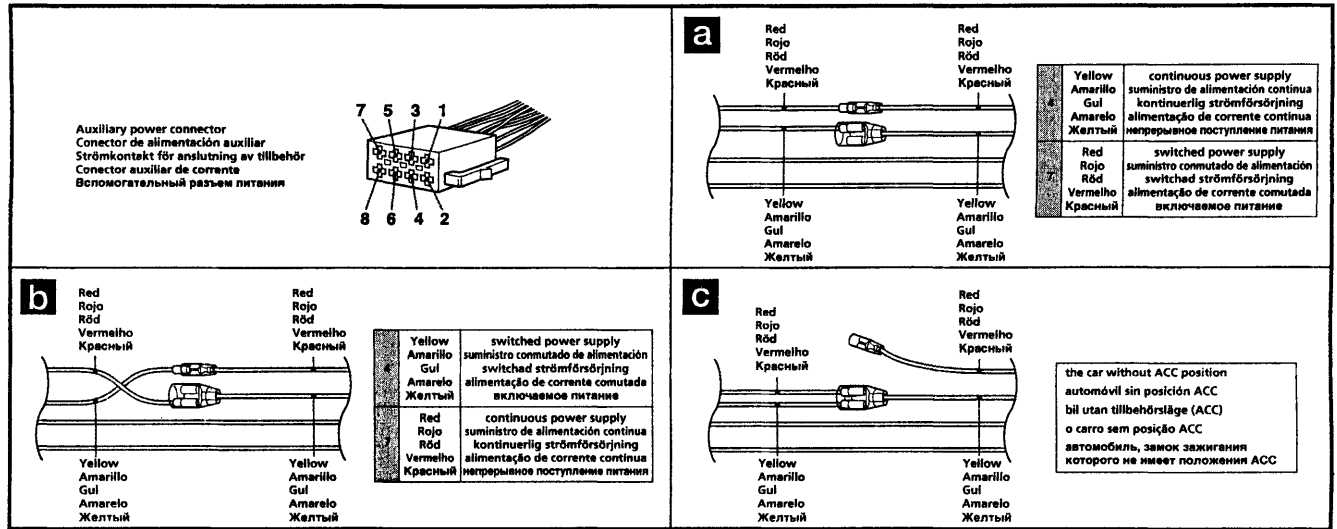
Kontakten för anslutning av tillbehör varierar från bil till bil. Kontrollera hur bilens anslutningskontakt är konstruerad så att du ansluter på rätt sätt. Det finns tre grundläggande typer (visas nedan). Du kan eventuellt behöva växla plats mellan de röda och gula ledningarna i bilstereos strömkabel. Passa ihop ledningarna korrekt och anslut sedan enheten till bilens strömanslutning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bilärförsäljaren.

## Diagrama de ligação de corrente

O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). É possível que tenha de trocar as posições dos fios vermelho e amarelo do cabo de alimentação do autorádio. Depois de fazer a correspondência correta entre as ligações e os cabos de alimentação comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.

## Схема подключения питания

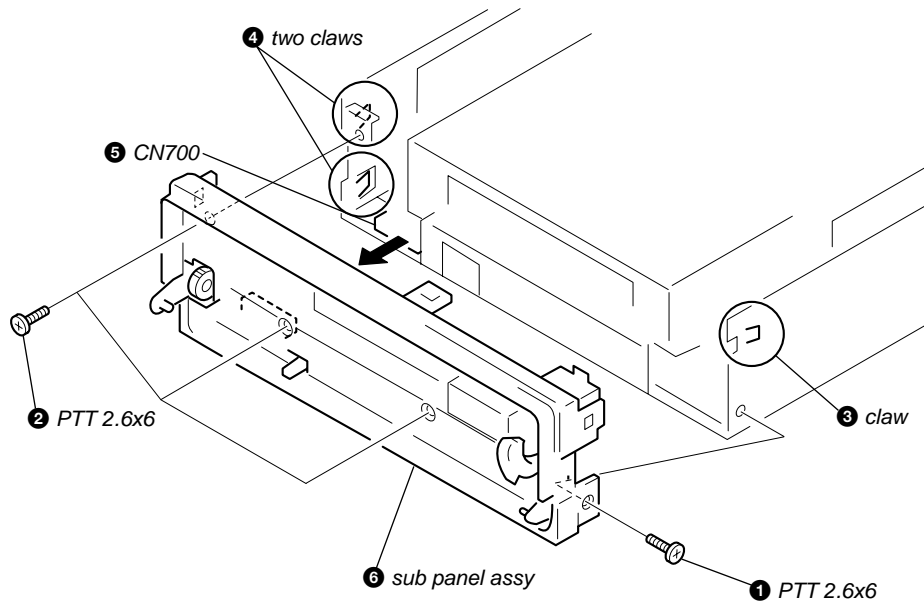
В разных автомобилях могут использоваться разные разъемы вспомогательного питания. Для того чтобы убедиться в правильности подсоединения, обязательно сверьтесь со схемой разъема подключения вспомогательного питания Вашего автомобиля. Есть три основных типа (как показано на рисунке ниже). Возможно, при подключении Вам придется поменять местами красный и желтый провода соединительного кабеля питания стереосистемы. После проверки соответствия разводки разъемов автомобильного электропитания и проводов питания магнитолы подключите магнитолу к автомобильному контуру электропитания. Если у Вас возникли какие-либо вопросы или проблемы, связанные с подключением магнитолы, которые не рассматриваются в настоящем руководстве, обратитесь за советом к дилеру автомобильной фирмы.



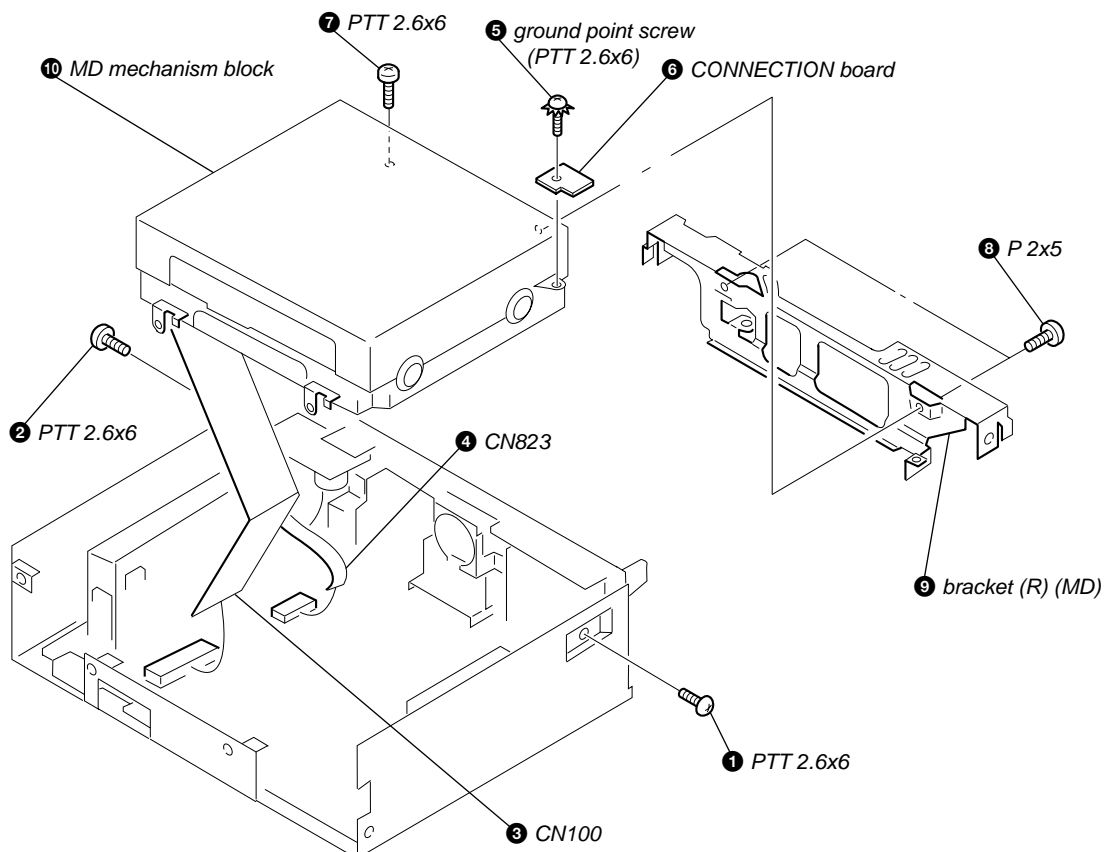
## SECTION 2 DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

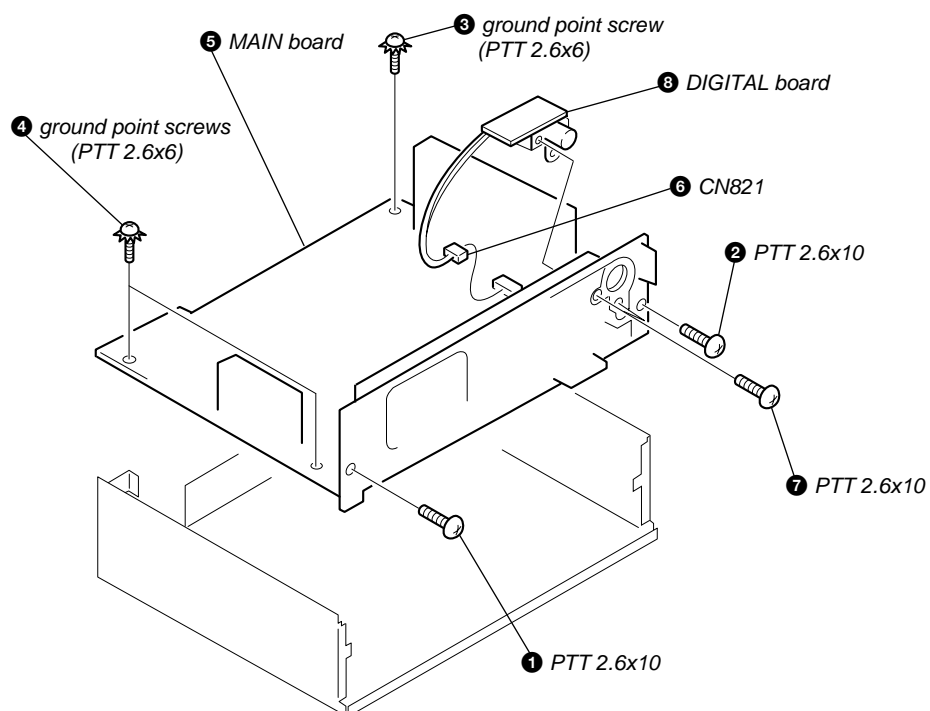
### 2-1. SUB PANEL ASSY



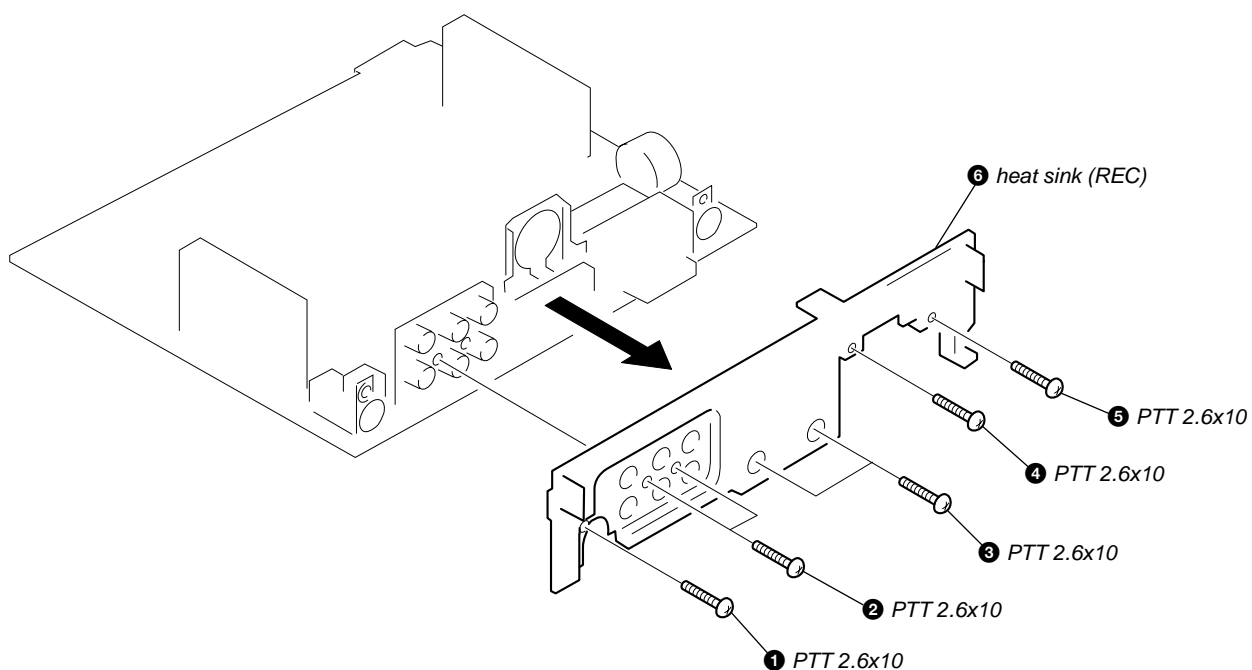
### 2-2. MD MECHANISM BLOCK



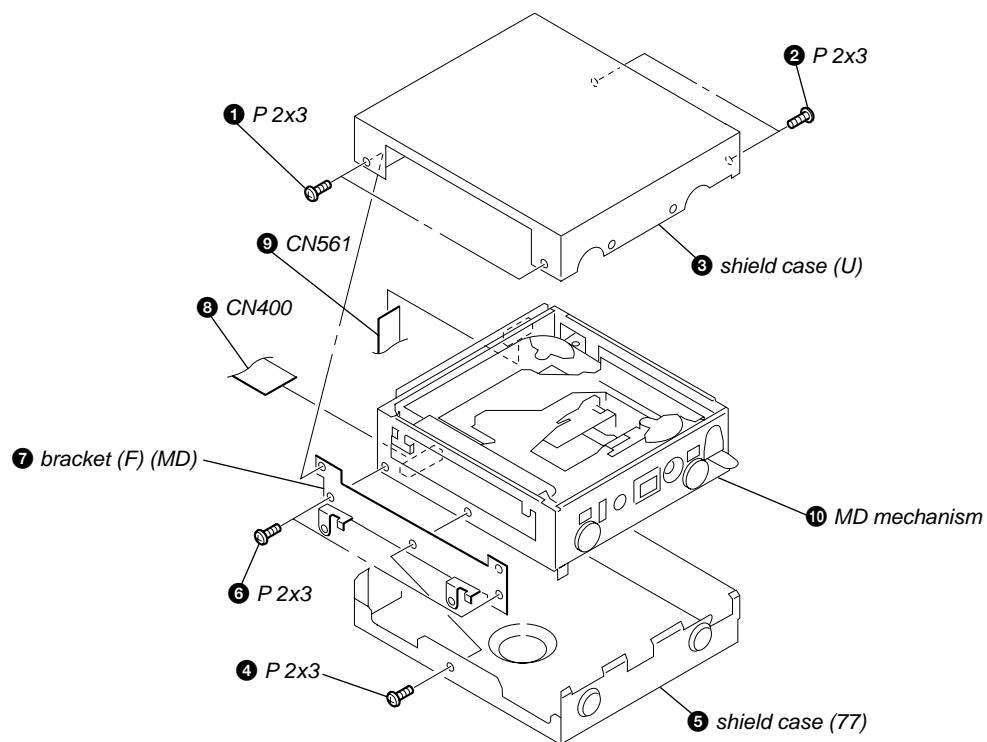
## 2-3. MAIN BOARD, DIGITAL BOARD



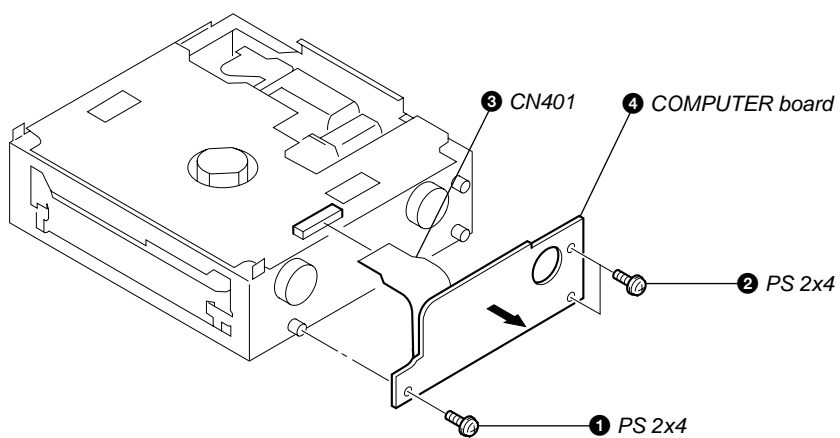
## 2-4. HEAT SINK (REC)



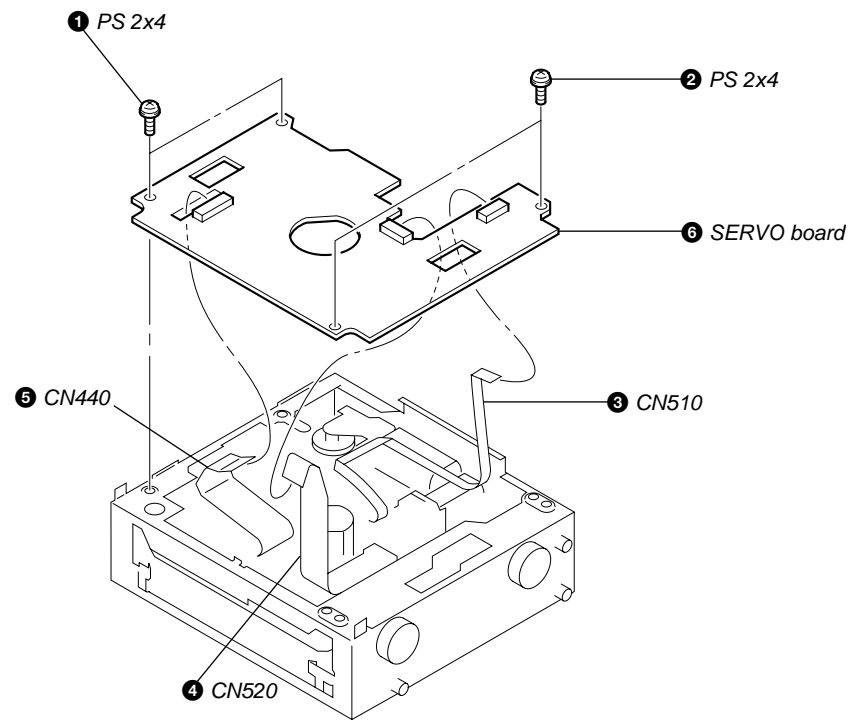
## 2-5. MD MECHANISM



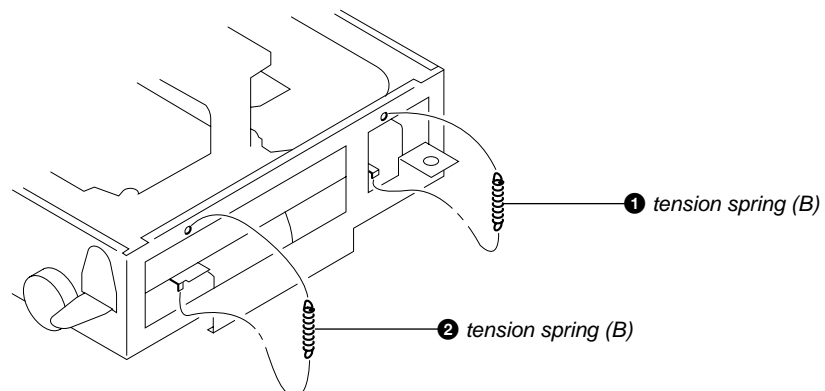
## 2-6. COMPUTER BOARD



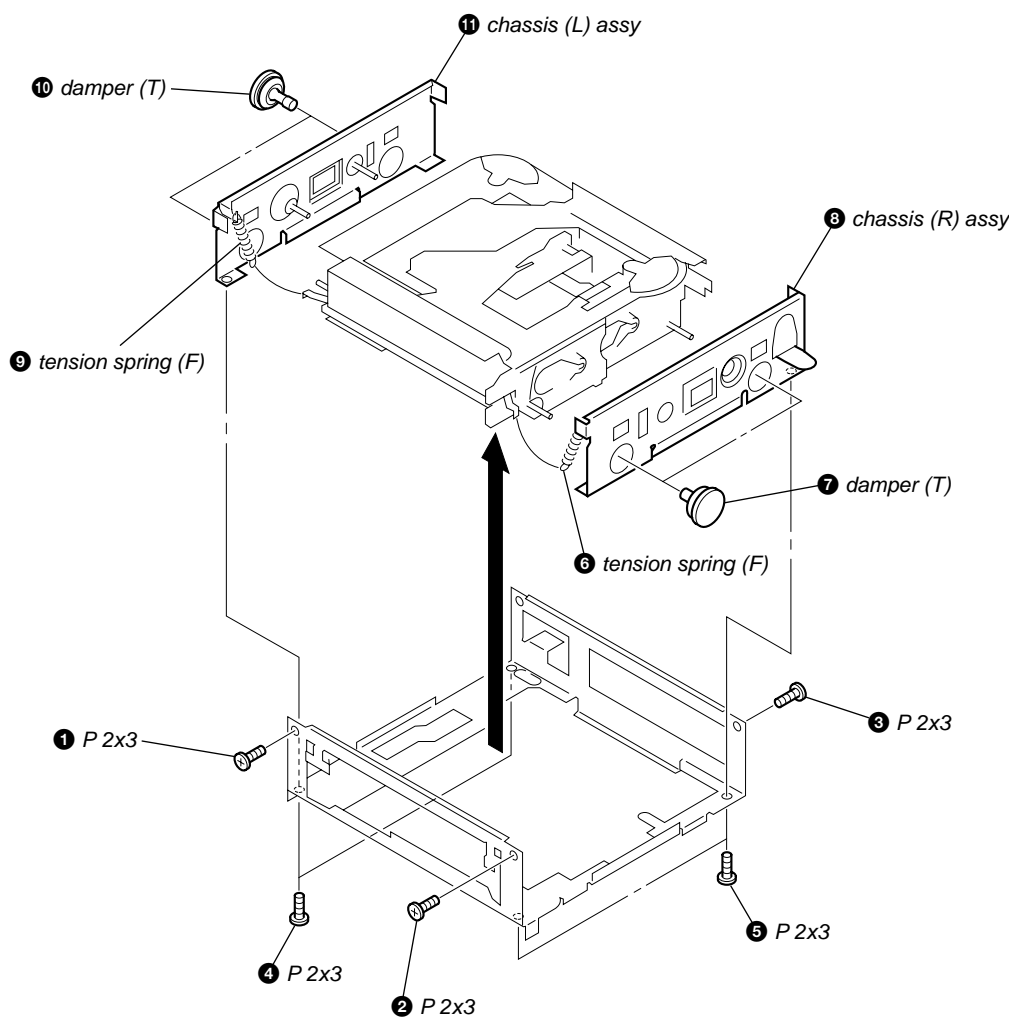
## 2-7. SERVO BOARD



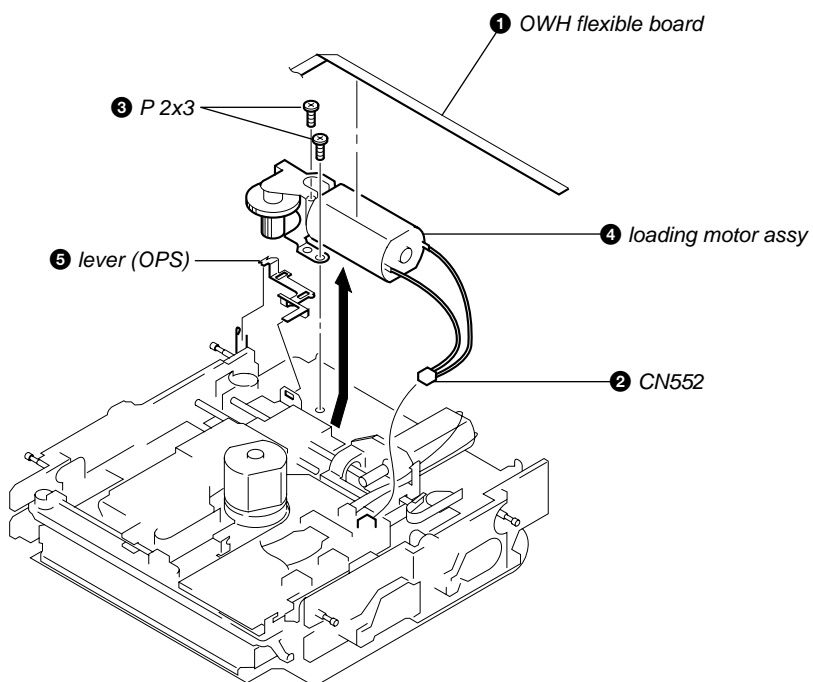
## 2-8. TENSION SPRING (B)



## 2-9. CHASSIS (L), (R) ASSY

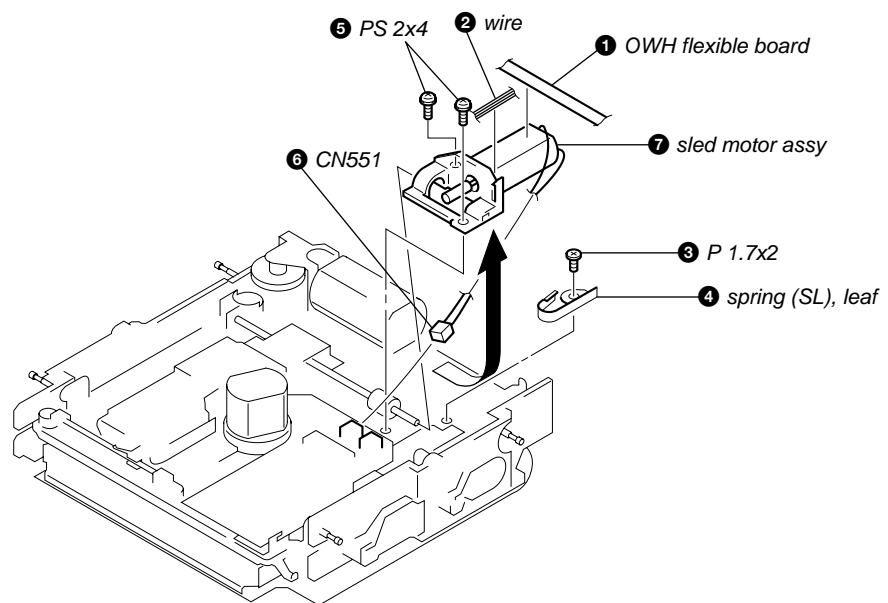


## 2-10. LOADING MOTOR ASSY

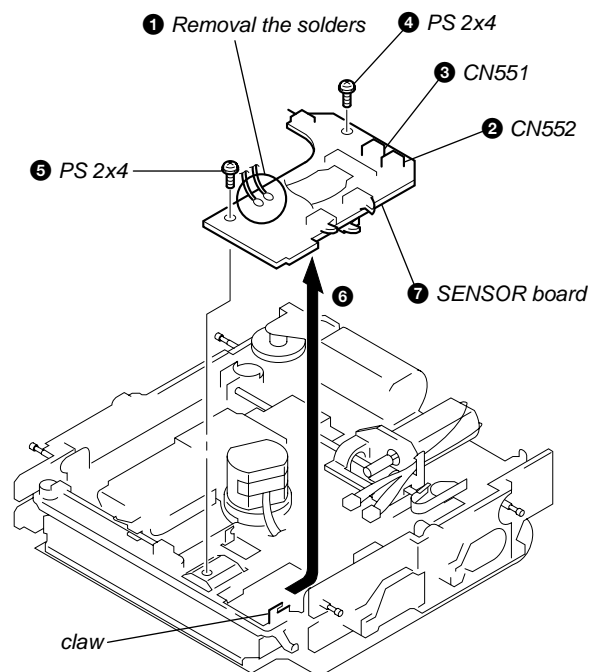




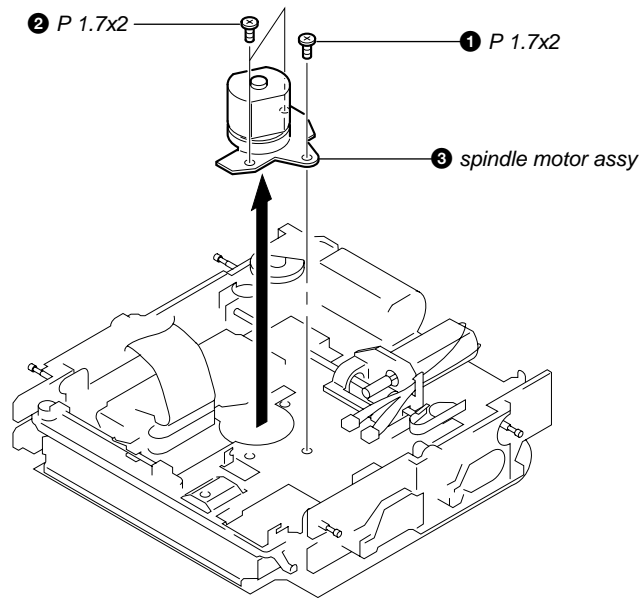
## 2-11. SLED MOTOR ASSY



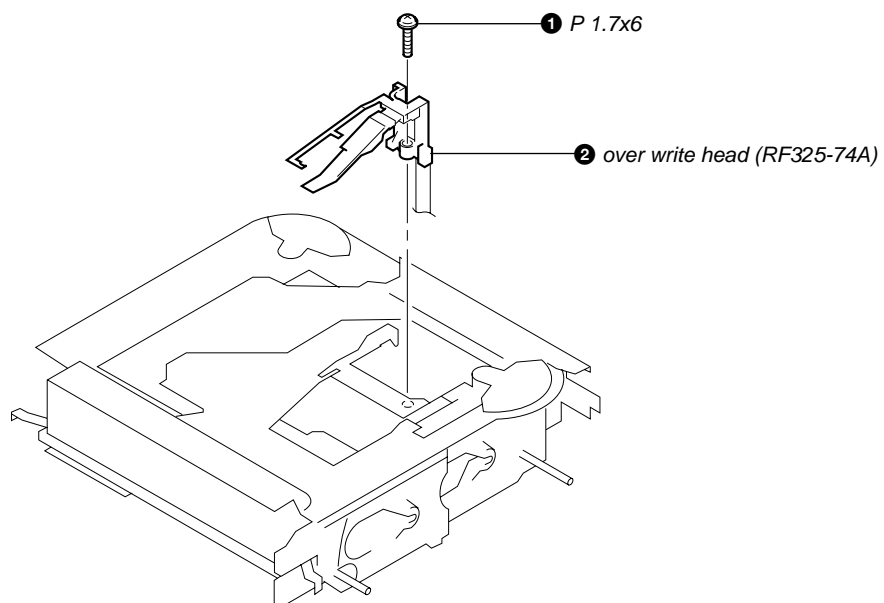
## 2-12. SENSOR BOARD



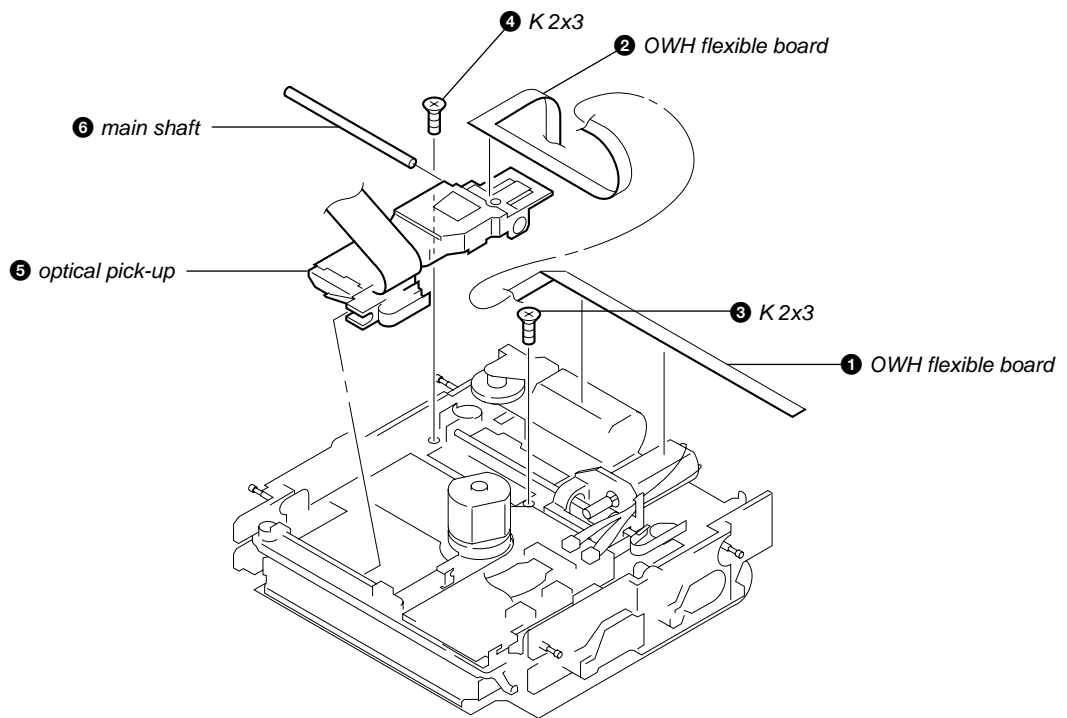
## 2-13. SPINDLE MOTOR ASSY



## 2-14. OVER WRITE HEAD



## 2-15. OPTICAL PICK-UP



## SECTION 3 DIAGRAMS

### 3-1. IC PIN DESCRIPTIONS

#### • IC560 MB90574FPV-G-297-BND (MD CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	SCTX	O	Write data transmission timing output to CXD2652AR, ON/OFF output of magnet head
2	LDON	O	Laser ON/OFF control output (“H”: Laser ON)
3	LOAD	O	Loading motor control output (Loading direction)
4	EJECT	O	Loading motor control output (Eject direction)
5	MDMON	O	MD mechanism deck power supply control output
6	LNKOFF	O	LINK OFF output to SONY BUS (“H”: LINK OFF, “L”: LINK ON)
7	UNIREQ	O	Request output to SONY BUS (“H”: Request ON) (Not used in this set.)
8	VCC	—	Power supply pin (+5 V)
9, 10	NC	—	Not used (Open)
11	FLASH-W	I	Select input for flash write (“L”: Flash write mode)
12	RXD/DSPSI	I	UART RXD data input
13	TXD/DSPSO	O	UART TXD data output
14	LIMIT-IN	I	Sled innermost track detection switch input (“L”: Innermost track)
15	EE CKO	O	Serial clock output for EEPROM
16	EE SIO	I/O	EEPROM data input/output
17	SENS IN	I	Disk photo sensor input (“H”: With desk)
18, 19	NC	—	Not used (Open)
20	SRDT	I	Data input from MD servo IC
21	SWDT	O	Data output to MD servo IC
22	SCLK	O	Clock output to MD servo IC
23, 24	NC	—	Not used (Open)
25	UNISI	I	Data input from SONY BUS
26	UNISO	O	Data output to SONY BUS
27	UNCKI	I	Clock input from SONY BUS
28	MOD	O	Laser modulation select signal output
29, 30	NC	—	Not used (Open)
31	FOPEN	I	Front panel open signal input
32	CLOSE OK	O	Front panel open/close request signal output
33	VSS	—	Ground pin
34	C	—	Power stabilization capacitor pin
35	AGCHK	O	Effect output when aging operation end of test mode
36	AGING	O	Output of aging operation condition when test mode (Normally, open)
37	TFTON	O	Output of drop running condition when test mode (Normally, open)
38	DVCC	—	Power supply pin for D/A converter (+5 V)
39	DVSS	—	Ground pin for D/A converter
40	ERR-PWM	O	PWM output of error rate (Normally, open)
41	ADER-PWM	O	PWM output of AD error (Normally, open)
42	AVCC	—	Power supply pin for A/D converter (+5 V)
43	AVRH	—	External reference power supply for A/D converter (Connect to AVCC in this set.)
44	AVRL	—	External reference power supply for A/D converter (Connect to AVSS in this set.)
45	AVSS	—	Ground pin for A/D converter
46	NC	—	Not used (Open)
47	ACNT	I	A/D input for designation on aging times of LOADING/EJECT
48	DOB-SEL	I	A/D input for designation on digital out bit number (Fixed at “H” in this set)
49	INIT	I	Initial input when reset
50, 51	TEST 0, 1	I	Test pin (Normally, open)
52	REF-SEL	I	Reference select input (Fixed at “L” in this set.)
53	NC	—	Not used (Open)
54	VCC	—	Power supply pin (+5 V)
55	TSTMOD	I	Test mode input (“L”: Test mode)

Pin No.	Pin Name	I/O	Pin Description
56	TSTSO	O	Data output for test mode display (Normally, open)
57	TSTCKO	O	Clock output for test mode display (Normally, open)
58 – 62	NC	—	Not used (Open)
63	VSS	—	Ground pin
64	NC	—	Not used (Open)
65	$\overline{\text{DACRST}}$	O	Reset output to DAC IC
66	DACCES	O	Chip enable output to DAC (SUB)
67	DAC SO	O	DAC control serial data output
68	DAC CKO	O	DAC control serial clock output
69	DAC CEF	O	Chip enable output to DAC (FRONT)
70	DAC CER	O	Chip enable output to DAC (REAR)
71, 72	NC	—	Not used (Open)
73	XIA	—	Input for sub clock oscillation (Fixed at “H” in this set)
74	XOA	—	Input for sub clock oscillation (Connect to ground pin in this set)
75	$\overline{\text{CC-XINT}}$	I	XINT interruption input from MD servo IC
76	$\overline{\text{BUS-ON}}$	I	BUS ON input of SONY BUS
77	BU-IN	I	Power instantaneously cut off check port of system
78	$\overline{\text{SQ-SY}}$	I	SUBQ SYNC interruption input from MD servo IC
79	DISC-IN	I	DISC-IN (cartridge in switch) sensor input of MD mechanism deck
80	A-ATT	O	Audio attenuator output (“H”: ATT ON)
81	$\overline{\text{DQ-SY}}$	I	Subcord Q sync of DIGITAL IN U-bit CD format from MD servo IC
82	NC	—	Not used (Open)
83	EJECT IN	I	EJECT (MD) switch input
84	SORCE	I	Select signal input of signal input (analog/digital input) (Not used in this set)
85	LOCK	O	Output of CLV lock condition when test mode (Normally, open)
86	HSTX	—	Hardware standby input (Connect to SYSRST in this set)
87	MD2	—	CPU operation mode designation input (Connect to ground pin in this set)
88, 89	MD1, 0	—	CPU operation mode designation input (Fixed at “H” in this set)
90	RSTX	—	Reset input (Fixed at “H” in this set)
91	VSS	—	Ground pin
92	X0	I	Main clock oscillation input (3.68 MHz)
93	X1	O	Main clock oscillation output (3.68 MHz)
94	VCC	—	Power supply pin (+5 V)
95, 96	NC	—	Not used (Open)
97	RAMBU	I	RAM backup detection input
98, 99	NC	—	Not used (Open)
100	MD/REC-ON	O	Power control output for overlight head
101	RF-ON	O	Power control output for RF AMP
102	REC-P	I	Detection signal input from REC position detection switch (“L”: REC position)
103	PLAY-P	I	Detection signal input from PLAY position detection switch (“L”: PLAY position)
104	PROTECT	I	Recording prevention claw detection input from write protect detection switch (“H”: Write Protect)
105	REFLECT	I	Desk reflectance detection input from reflect detection switch (“H”: Low reflectance disk IN)
106	PACK-IN	I	PACK-IN (LOADING END SENSOR) sensor input of MD mechanism deck
107	NC	—	Not used (Open)
108	REC/PLAY	I	Change select input on recording mechanism deck and playing mechanism deck (“H”: REC, “L”: PLAY) (Fixed at “H” in this set)
109	DFCTSEL	I	Select input on used of DEFECT2 function (Not used in this set (Fixed at “H”))
110	WRPWR	O	Laser power select signal output to optical pick-up or CXD2652AR (“L”: READ POWER, “H”: WRITE POWER)
111	PREHEAT	O	Preheat control output (“H”: Preheat ON)
112	$\overline{\text{MDRST}}$	O	Reset output to MD servo IC

Pin No.	Pin Name	I/O	Pin Description
113	MDLAT	O	Latch output to MD servo IC
114	SERVO-ON	O	Power control output to MD servo IC
115 – 118	MNT3 – 0	I	Monitor 3 – 0 input of CXD2652AR
119	VSS	—	Ground pin
120	SENS	I	Sens input from MD servo IC



• IC650 HD64F2357F (DISPLAY CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1, 2	PG3, 4	O	Not used in this set (Open)
3	VSS	—	Ground pin
4	NC	—	Not used in this set (Open)
5	VCC	—	Power supply pin (+5 V)
6 – 9	PC0 – 3	O	Not used in this set (Open)
10	VSS	—	Ground pin
11 – 14	PC4 – 7	O	Not used in this set (Open)
15 – 18	PB0 – 3	O	Not used in this set (Open)
19	VSS	—	Ground pin
20 – 23	PB4 – 7	O	Not used in this set (Open)
24	PA0	O	Signal out select control output to the IC652 (BA3834F)
25	PA1	O	Signal out select control output to the IC652 (BA3834F)
26	PA2	O	Signal out select control output to the IC652 (BA3834F)
27	PA3	O	Signal out select control output to the IC652 (BA3834F)
28	VSS	—	Ground pin
29 – 32	PA4/IRQ4 – PA7/IRQ7	O	Not used in this set (Open)
33	SP LAT	I	Not used in this set (Open)
34	P66/IRQ2	I	Not used in this set (Open)
35, 36	VSS	—	Ground pin
37	P65/IRQ1	O	Not used in this set (Open)
38	BUS ON	I	SONY BUS on input “L”: Active
39	VCC	—	Power supply pin (+5 V)
40	CD/MD	O	Not used in this set (Open)
41 – 43	PE1 – 3	O	Not used in this set (Open)
44	VSS	—	Ground pin
45	TIR IND	O	Not used in this set (Open)
46, 47	PE 5, 6	O	Not used in this set (Open)
48	MD LOCK	O	Not used in this set (Open)
49	BU IN	I	Backup power supply detection input “H”: Back up
50	LINK OFF	O	Link off output
51	PD2	O	Not used in this set (Open)
52	ILL ON	O	Illumination power supply control output
53	VSS	—	Ground pin
54, 55	NCO	O	Not used in this set (Open)
56	PD6	O	Not used in this set (Open)
57	BOOT	I	Display microcomputer write control input
58	VCC	—	Power supply pin (+5 V)
59	NC	—	Not used in this set (Open)
60	TX/LCDDATA	O	LCD driver serial data output/Flash microcomputer write data output
61	SP SI	I	DSP serial data input
62	RX/DOOR SW	I	Flash microcomputer write data input/Door detection input
63	SP SCK	I	Not used in this set (Open)
64	LCD CLK	O	LCD driver serial clock output
65	VSS	—	Ground pin
66	LCD CEO	O	LCD chip enable signal output
67, 68	VSS	—	Ground pin
69	LCDINH	O	Not used in this set (Open)
70	LCDCEI	O	LCD chip enable signal output
71	P63	O	Not used in this set (Open)
72 – 78	P27 – 21	O	Not used in this set (Open)
79	FL W	O	Flash write control output
80	FWE (L)	O	Flash write enable input

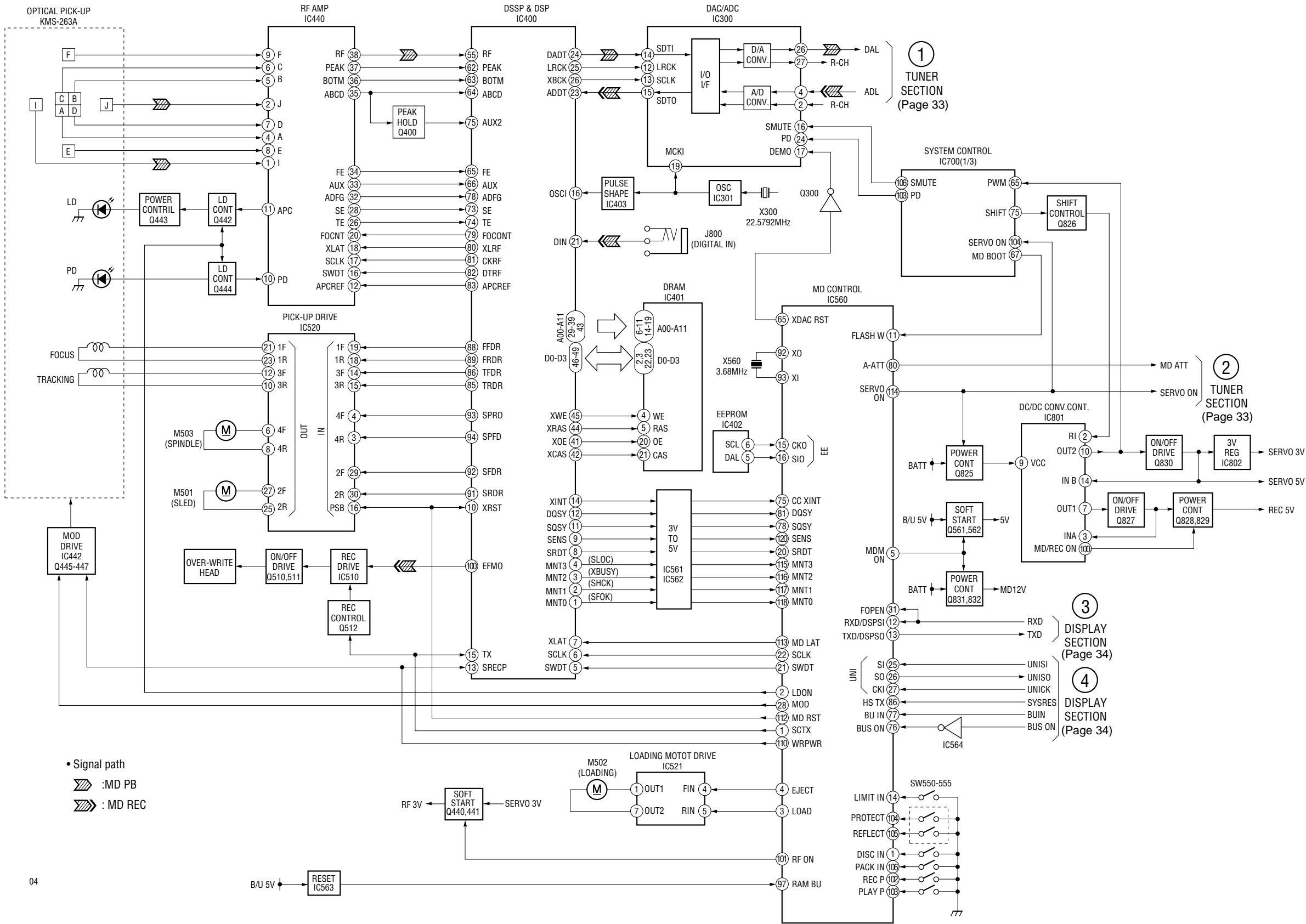
Pin No.	Pin Name	I/O	Pin Description
81	RES	I	System reset input
82	NMI (H)	I	Non-maskable interruption input (Connect to pin ④9 (BU IN).)
83	STBY (H)	I	Hardware standby input “H”: Not used
84	VCC	—	Power supply pin (+5 V)
85	XTAL	O	Crystal oscillation output (18.432 MHz)
86	EXTAL	I	Crystal oscillation input (18.432 MHz)
87	VSS	—	Ground pin
88	PF7	O	Not used in this set (Open)
89	VCC	—	Power supply pin (+5 V)
90 – 96	PF6 – 0	O	Not used in this set (Open)
97	UNI-SO	O	SONY BUS system serial data output
98	UNI-SI	I	SONY BUS system serial data input
99, 100	VSS	—	Ground pin
101	UNI-SCK	I	SONY BUS system serial clock input
102	P53/ADTRG	O	Not used in this set (Open)
103	AVCC	—	Power supply pin (+5 V) of analog macro (D/A, A/D etc.)
104	VREF	—	A/D, D/A converter reference voltage pin (+5 V)
105	P40/AN0	I	Peak hold voltage detection input from the IC652 (BA3834F)
106 – 110	P41/AN0 – P45/AN5	I	Not used in this set (Connect to ground in this set)
111	P46/AN6/DA0	I	Not used in this set (Connect to ground in this set)
112	P47/AN7/DA1	I	Not used in this set (Connect to ground in this set)
113	AVSS	—	Ground pin
114	VSS	—	Ground pin
115 – 122	P17 – P10	O	Not used in this set (Open)
123 – 125	MD0 – 2 (H)	I	Operation mode setting input (Fixed at “H” in this set)
126 – 128	PG0 – 2	O	Not used in this set (Open)

• IC700 MB90574PMT-G-259-BND (SYSTEM CONTROL)

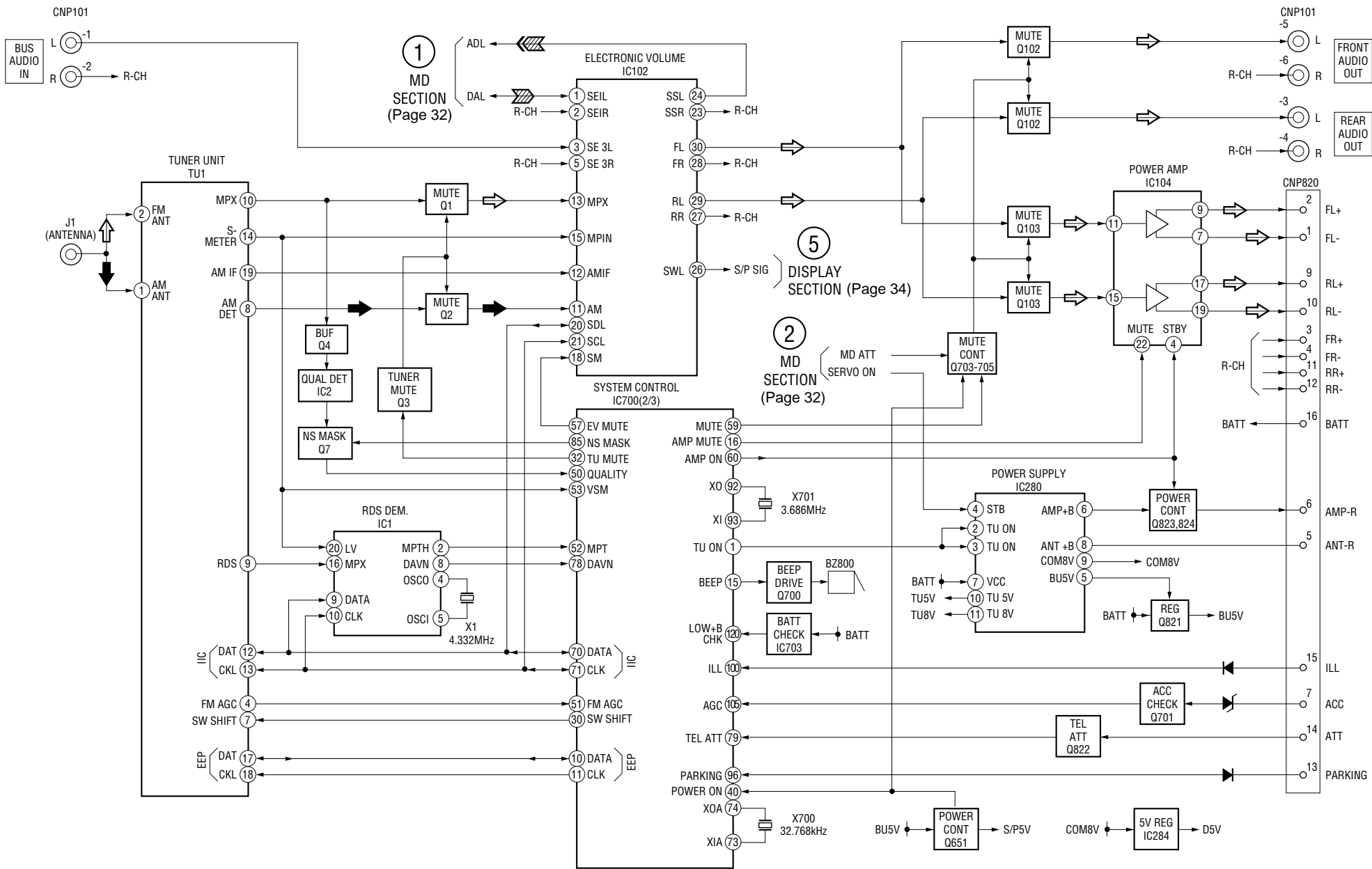
Pin No.	Pin Name	I/O	Pin Description
1	TUN ON	O	Tuner power control output (TU +5.6 V)
2	SET UP	O	Not used in this set (Open)
3	FM ON	O	Not used in this set (Open)
4	AM ON	O	Not used in this set (Open)
5	N.C.O	O	Not used in this set (Open)
6	SYS RESET	O	SONY BUS system reset output (SONY BUS interface to CD, external control)
7	BUS ON	O	SONY BUS on control output (SONY BUS interface to CD, external control)
8	VCC	—	+5 V power supply pin
9	FLS PON	O	Flash drive power control output (ILL ON power supply) “H” is output when flash read.
10	EEDATA	O	EEPROM data output
11	EECLK	O	EEPROM CLK output
12	DOOR SW/RXD	I	Door open/close detection input “L”: close, “H”: open
13	TXD	O	Serial data output
14	N.C.O	O	Not used in this set (Open)
15	BEEP	O	Beep output
16	AMP MUTE	O	Power amplifier mute output
17 – 19	N.C.O	O	Not used in this set (Open)
20	UNI SI	I	SONY BUS serial data input (SONY BUS interface to CD, external control)
21	UNI SO	O	SONY BUS serial data output (SONY BUS interface to CD, external control)
22	UNI CLK	I/O	SONY BUS serial clock input/output (SONY BUS interface to CD, external control)
23	N.C.O	O	Not used in this set (Open)
24	SIRCS	I	Remote commander (infrared rays reseiver) input
25 – 29	N.C.O	O	Not used in this set (Open)
30	SW SHIFT	O	Tuner switch shift output
31	N.C.O	O	Not used in this set (Open)
32	TUNER MUTE	O	Tuner mute control output (AM DET MUTE)
33	VSS	—	Ground pin
34	C	—	Capacitance connect pin of power supply stabilization
35	AD ON	O	Power supply control output for AD conversion
36	RDS ON	O	Power supply signal output to RDS
37	N.C.O	O	Not used in this set (Open)
38	DVCC	—	D/A converter VRER pin
39	DVSS	—	D/A converter GND pin
40	POWER ON	O	System power supply control output “L”: off, “H”: on
41	N.C.O	O	Not used in this set (Open)
42	AVCC	—	Analog power supply pin
43	AVRH	I	A/D converter Vref (+) pin
44	AVRL	I	A/D converter Vref (–) pin
45	AVSS	—	Analog ground pin
46	KEY IN0	I	Key signal input 0 (A/D analog input)
47	KEY IN1	I	Key signal input 1 (A/D analog input)
48	DSTSEL0	I	Initial setting input of destination
49	RC IN0	I	Key input of rotary commander (A/D analog input)
50	QUALITY	I	Noise detection input (A/D analog input)
51	FM AGC	I	FM AGC detection input (A/D analog input)
52	MPT	I	Multipath detection input (A/D analog input)
53	VSM	I	Signal meter detection input (A/D analog input)
54	VCC	—	+5 V power supply pin
55, 56	N.C.O	O	Not used in this set (Open)
57	E-VOL MOTE	O	Electronic volume mute output
58	N.C.O	O	Not used in this set (Open)

Pin No.	Pin Name	I/O	Pin Description
59	MUTE	O	LINE level mute output
60	AMP ON	O	Power amplifier standby control output (to STNBY pin of power IC)
61	N.C.O	O	Not used in this set (Open)
62	FLASH WHT	I	Flash memory read mode detect input
63	VSS	—	Ground pin
64	RE IN0	I	Rotary encoder input 0
65	PWM	I	D/D converter oscillator frequency signal input
66	RE IN1	I	Rorary encoder input 1
67	MD BOOT	I	Flash write select input
68	N.C.O	O	Not used in this set (Open)
69	RAM BÜ	I	RAM reset detection input
70	II DATA	I/O	I2C BUS serial data input/output (SONY BUS interface to tuner, electron volume, RDS.)
71	II CLK	I/O	I2C BUS serial clock input/output (SONY BUS interface to tuner, electron volume, RDS.)
72	RC IN1	I	Shift input of rotary commander
73	X1A	I	Low speed oscillator connect pin (32,768 kHz)
74	X0A	O	
75	SHIFT	O	D/D converter frequency change signal output
76	KEYACK	I	Key acknowledge input
77	BU IN	I	Backup voltage detection input
78	DAVN	I	Block synchronization detection input of RDS data
79	TEL ATT	I	Telephone (TEL) detection input
80	TEST IN	I	Test mode setting pin
81	DP BOOT	O	Display microcomputer frash write setting output “L” is output when write of display microcomputer
82 – 84	N.C.O	O	Not used in this set (Open)
85	NS MASK	O	Noise mask output
86	HSTX	I	Hardware standby input (This set connect to RSTX.)
87	MD2	I	Input for operation mode (This set connect to VSS.)
88	MD1	I	Input for operation mode (This set connect to VCC.)
89	MD0	I	Input for operation mode (This set connect to VCC.)
90	RSTX	I	Reset input
91	VSS	—	Ground pin
92	X0	O	High speed oscillator connect pin (3.6864 MHz)
93	X1	I	
94	VCC	—	+5 V power supply pin
95	N.C.O	O	Not used in this set (Open)
96	PARKING	I	Parking brake detection input “L”: packing condition
97	N.C.O	O	Not used in this set (Open)
98	SHIN	O	Not used in this set (Open)
99	N.C.O	O	Not used in this set (Open)
100	ILL IN	I	Illumination (ILL IN) detection input
101	NOSE SW	I	Front panel attachment detection input “L”: on, “H”: off
102	PACK IND	O	Door indicator output
103	PD	O	Codec power supply control output
104	SERVO-ON	I	Servo power supply control signal input from mechanism microcomputer “H”: on
105	ACC IN	I	Accessory power supply (ACC) detect input
106	SMUTE	O	Codec mute signal output “H”: mute
107 – 118	N.C.O	O	Not used in this set (Open)
119	VSS	—	Ground pin
120	LOW +B CHK	O	Low battery check output

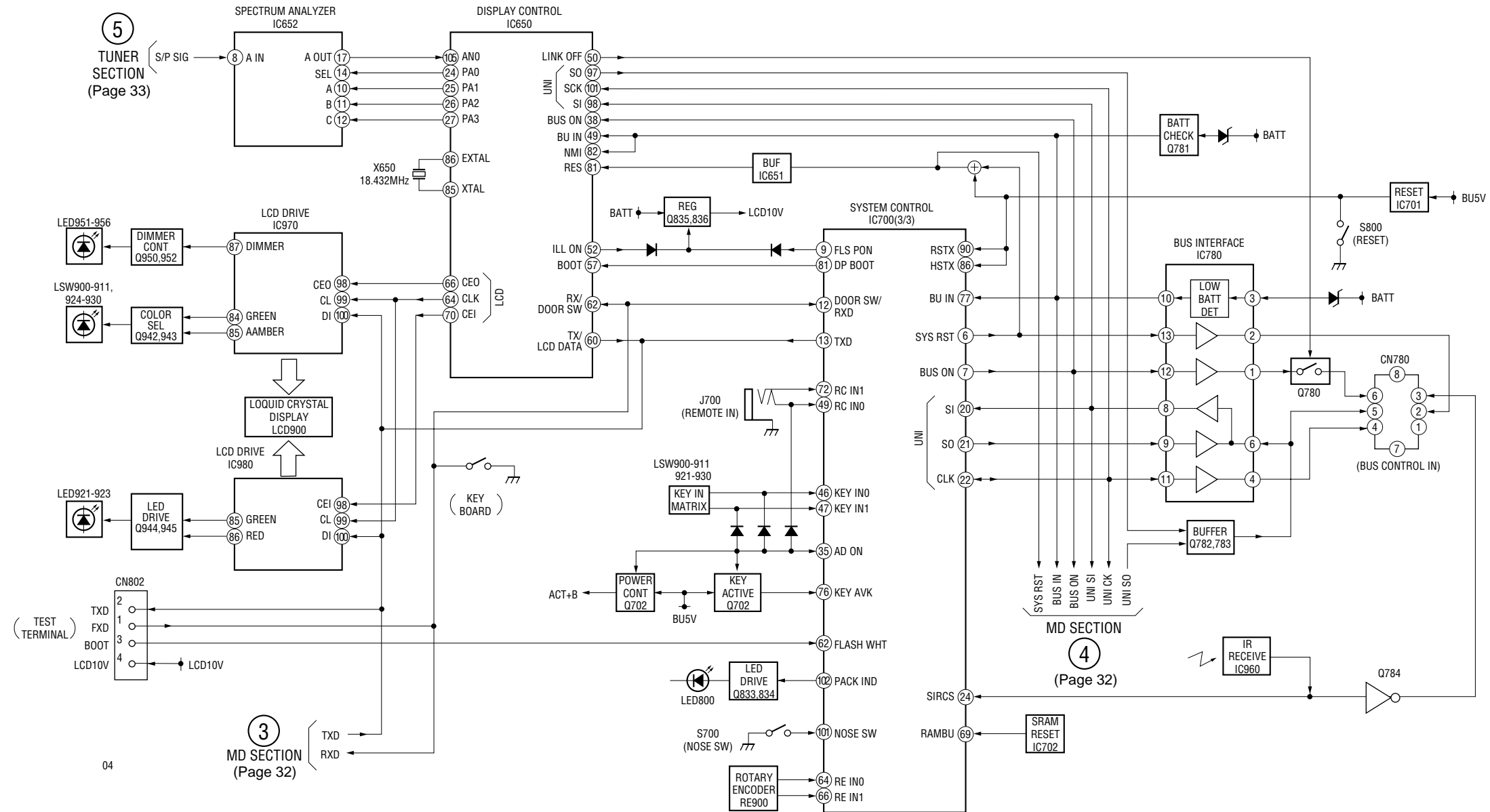
3-2. BLOCK DIAGRAM — MD SECTION —



3-3. BLOCK DIAGRAM — TUNER SECTION —

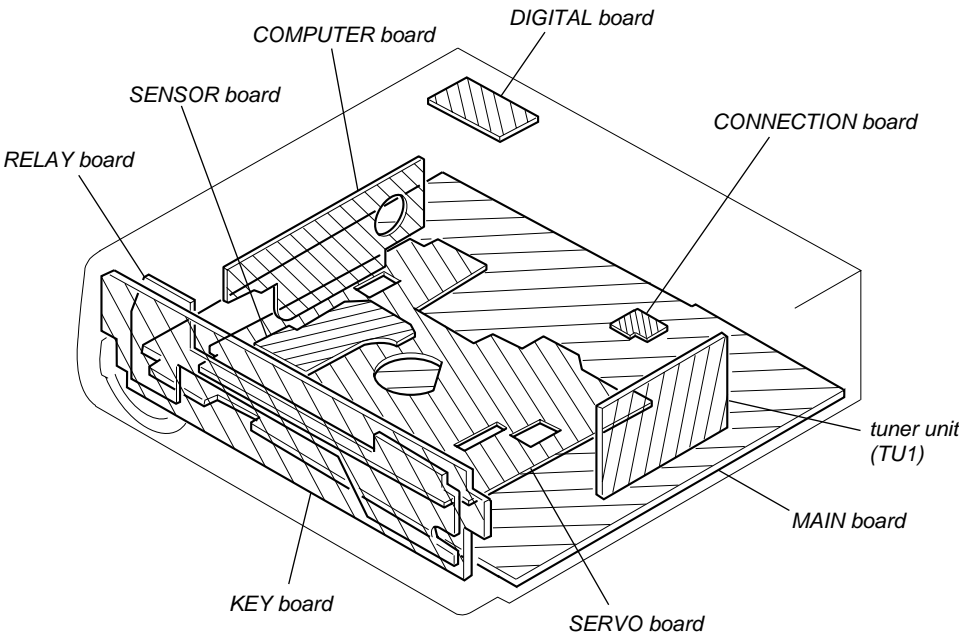


### 3-4. BLOCK DIAGRAM — DISPLAY SECTION —





3-5. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.  
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}\text{W}$  or less unless otherwise specified.
- % : indicates tolerance.
- $\Delta$  : internal component.
- $\square$  : panel designation.

**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

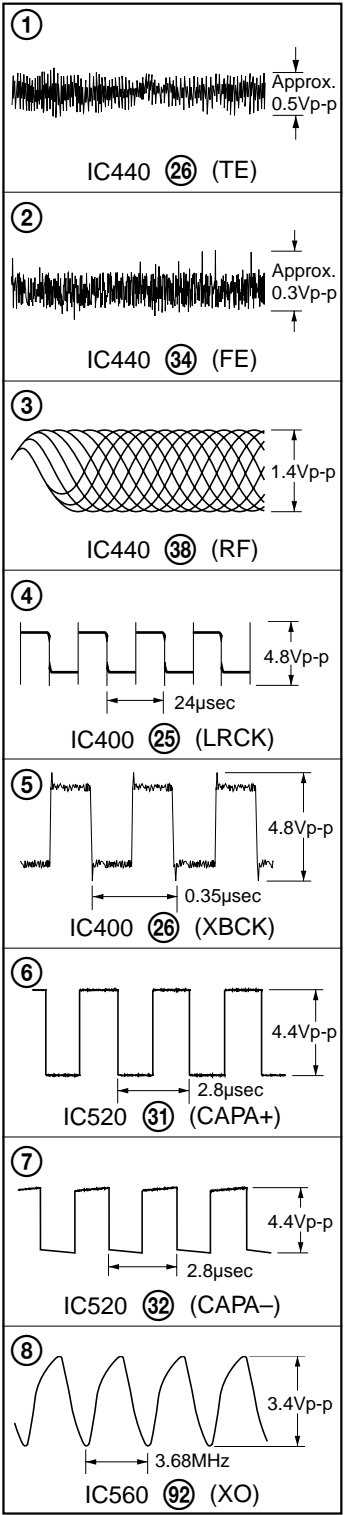
- $\boxed{\text{B}+}$  : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10  $\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - $\Rightarrow$  : FM
  - $\Rightarrow$  : MW
  - $\Rightarrow$  : MD

For printed wiring boards

- $\circ$  : parts extracted from the component side.
- $\square$  : parts extracted from the conductor side.
- $\circ$  : Through hole.
- $\Delta$  : internal component.
- $\square$  : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

**Caution:**  
Pattern face side: Parts on the pattern face side seen from the (Side B) pattern face are indicated.  
Parts face side: Parts on the parts face side seen from the (Side A) parts face are indicated.

• Waveforms (MODE:PLAY)  
(SERVO/COMPUTER BLOCK)

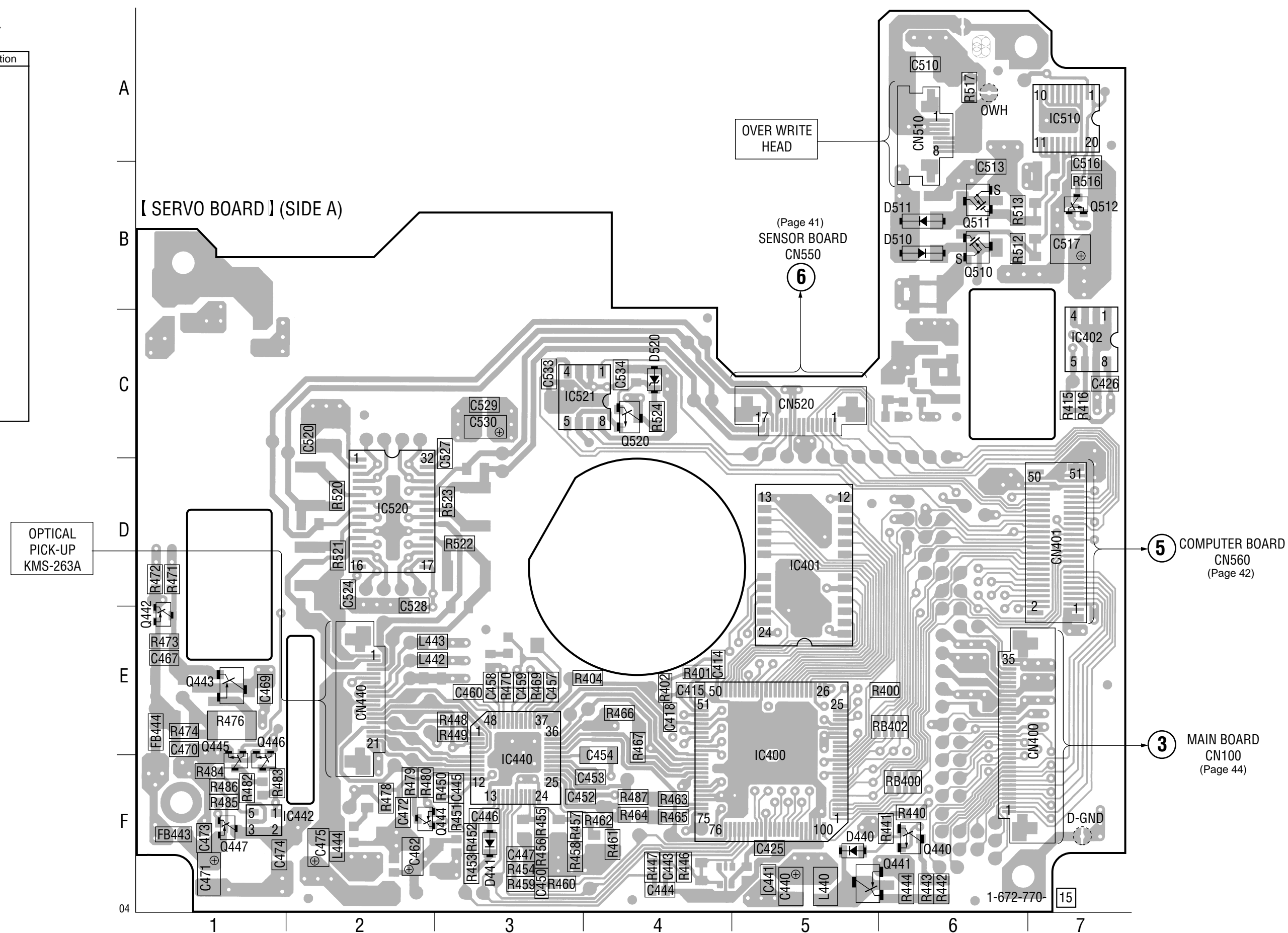


### 3-6. PRINTED WIRING BOARD — SERVO SECTION —

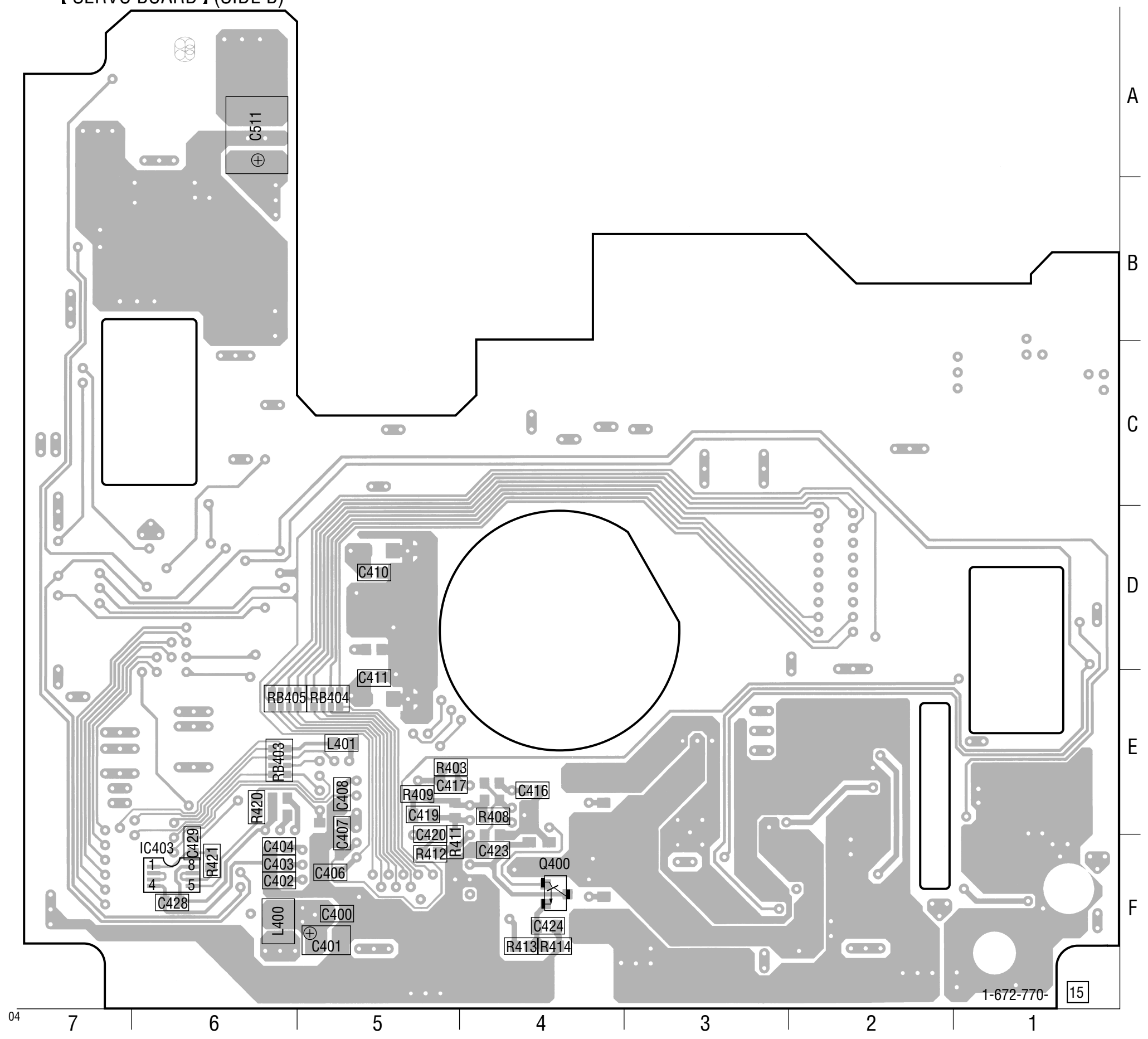
- **Semiconductor Location**

Ref. No.	Location
D440	F-5
D441	F-3
D510	B-6
D511	B-6
D520	C-4
D521	C-5
IC400	E-5
IC401	D-5
IC402	C-7
(IC403)	F-6
IC440	F-3
IC442	F-1
IC510	A-7
IC520	D-2
(Q400)	F-4
Q440	F-6
Q441	F-6
Q442	E-1
Q443	E-1
Q444	F-2
Q445	E-1
Q446	E-1
Q447	F-1
Q510	B-6
Q511	B-6
Q512	B-7
Q520	C-4

( ) : SIDE B

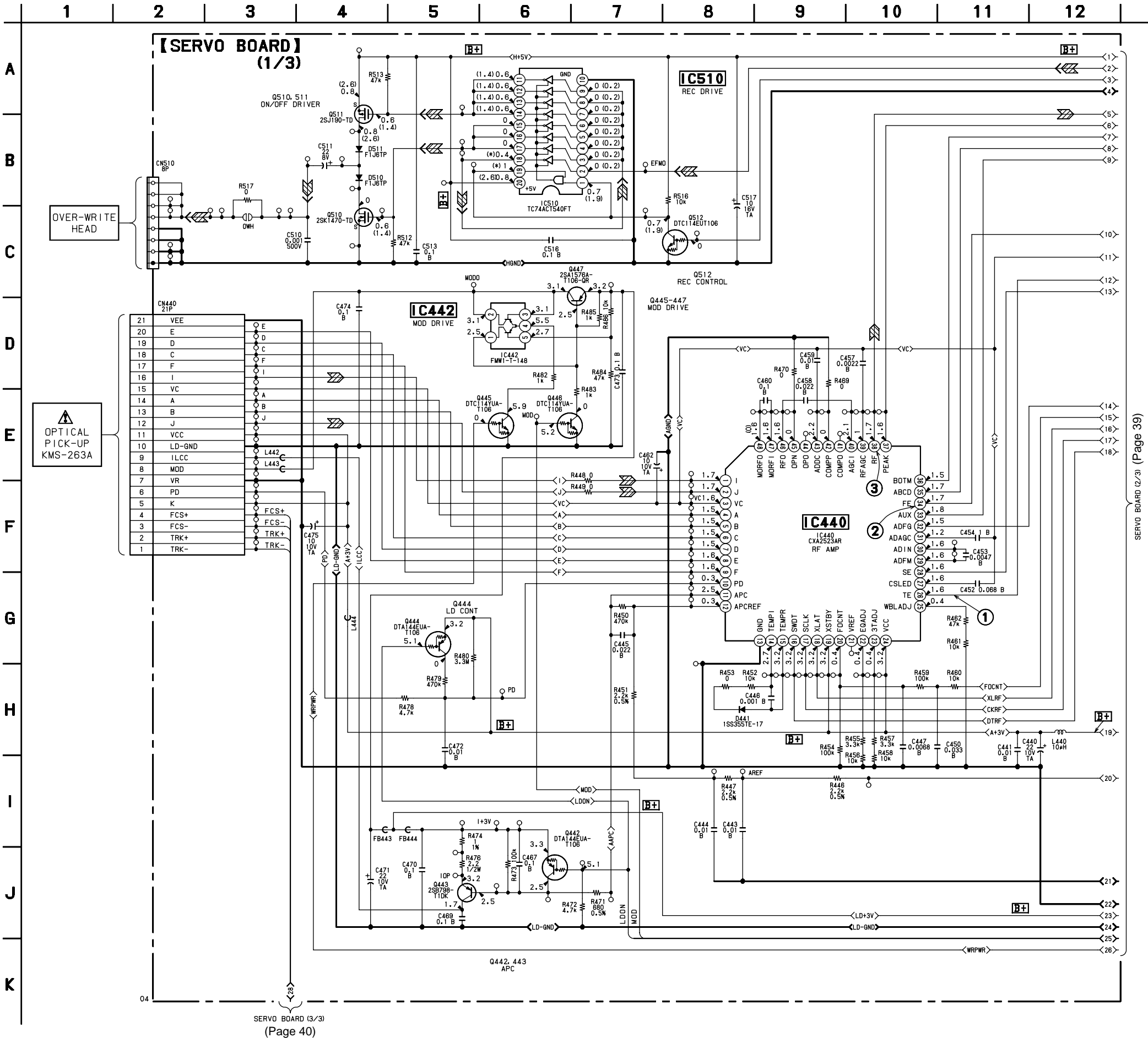


【 SERVO BOARD 】 (SIDE B)



- Refer to page 35 for Waveforms.

**3-7. SCHEMATIC DIAGRAM — SERVO SECTION (1/3) — • Refer to page 54 for IC Block Diagrams.**



**Note:**

- Voltage is dc with respect to ground under no-signal condition.

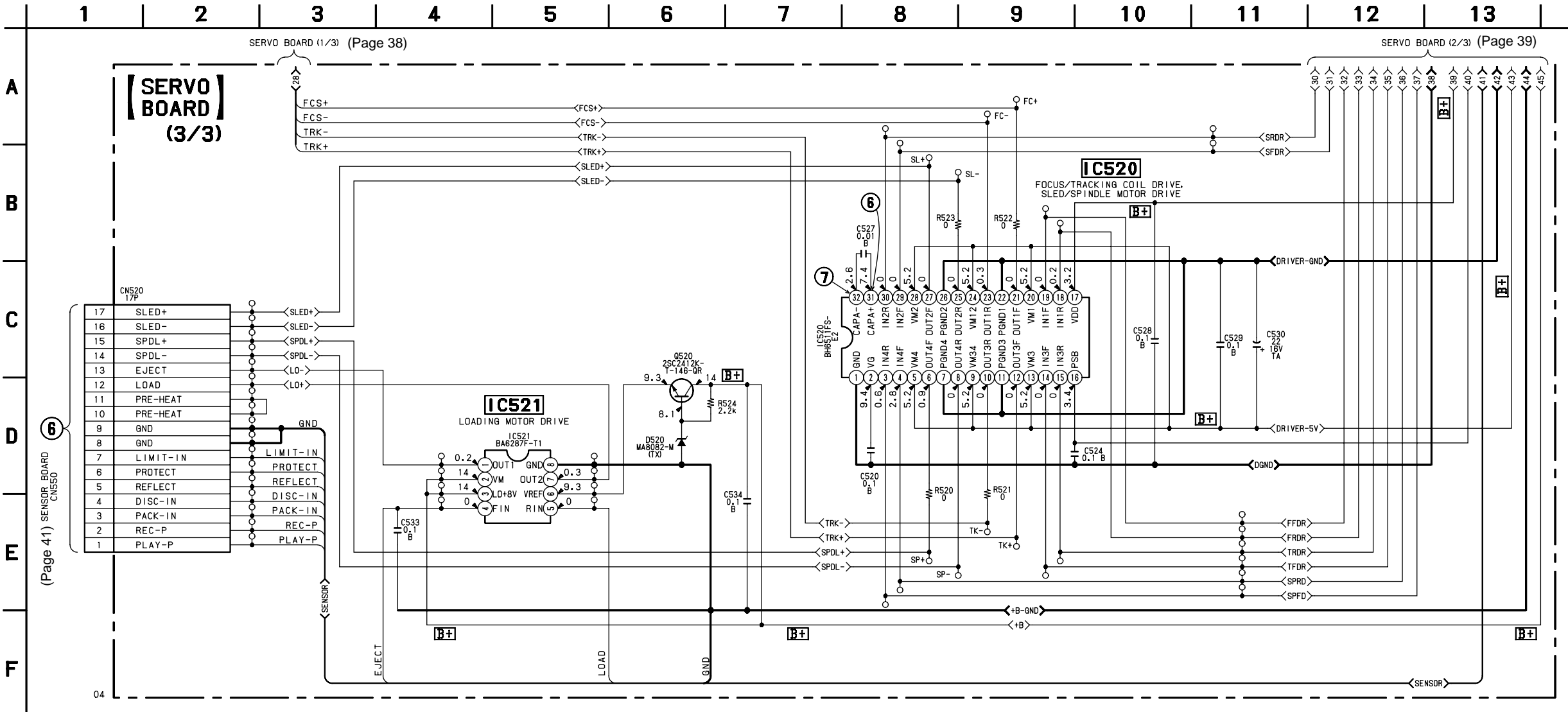
no mark : MD PLAY  
(        ) : MD REC





• Refer to page 35 for Waveforms.

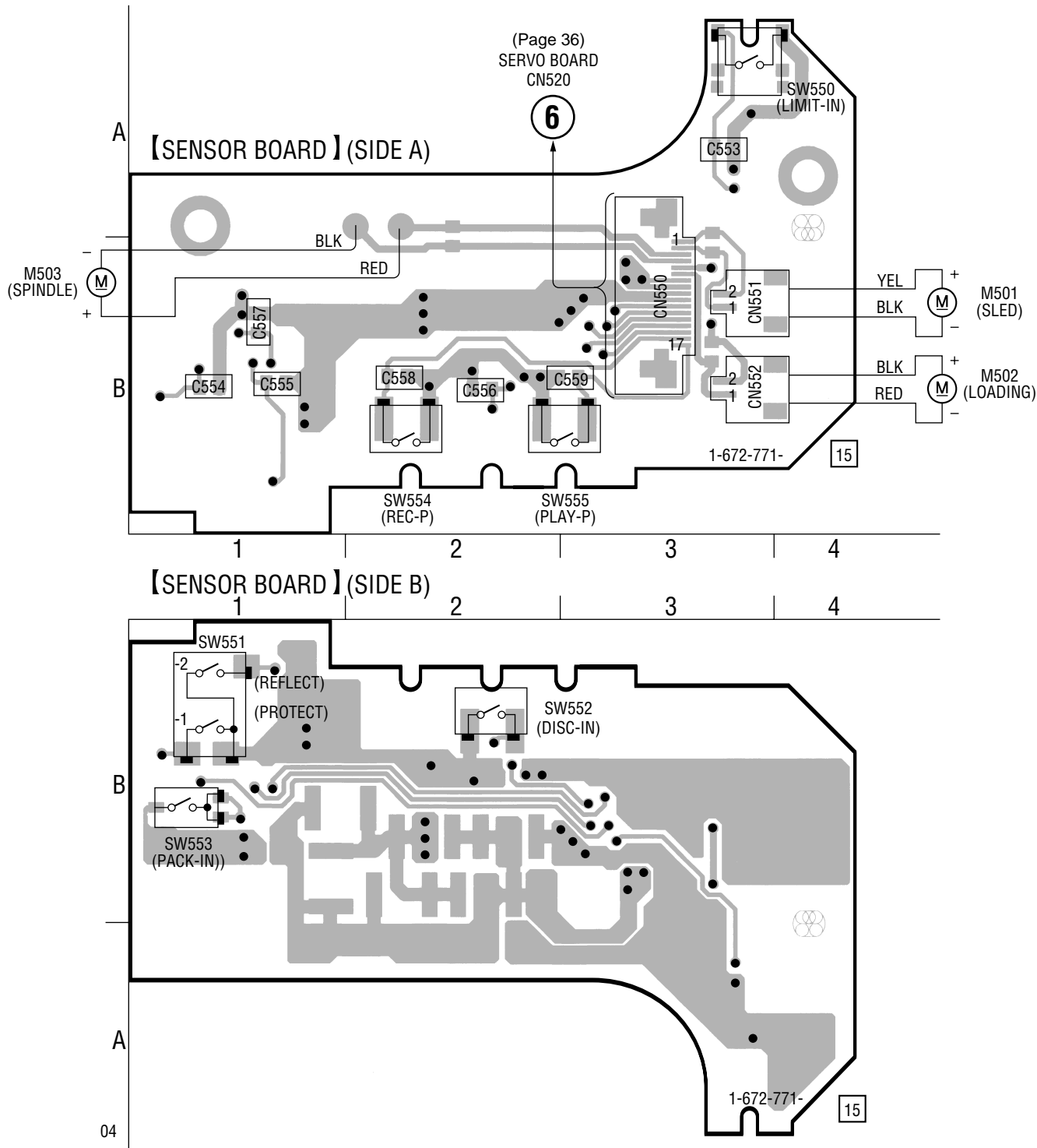
3-9. SCHEMATIC DIAGRAM — SERVO SECTION (3/3) — • Refer to page 54 for IC Block Diagrams.



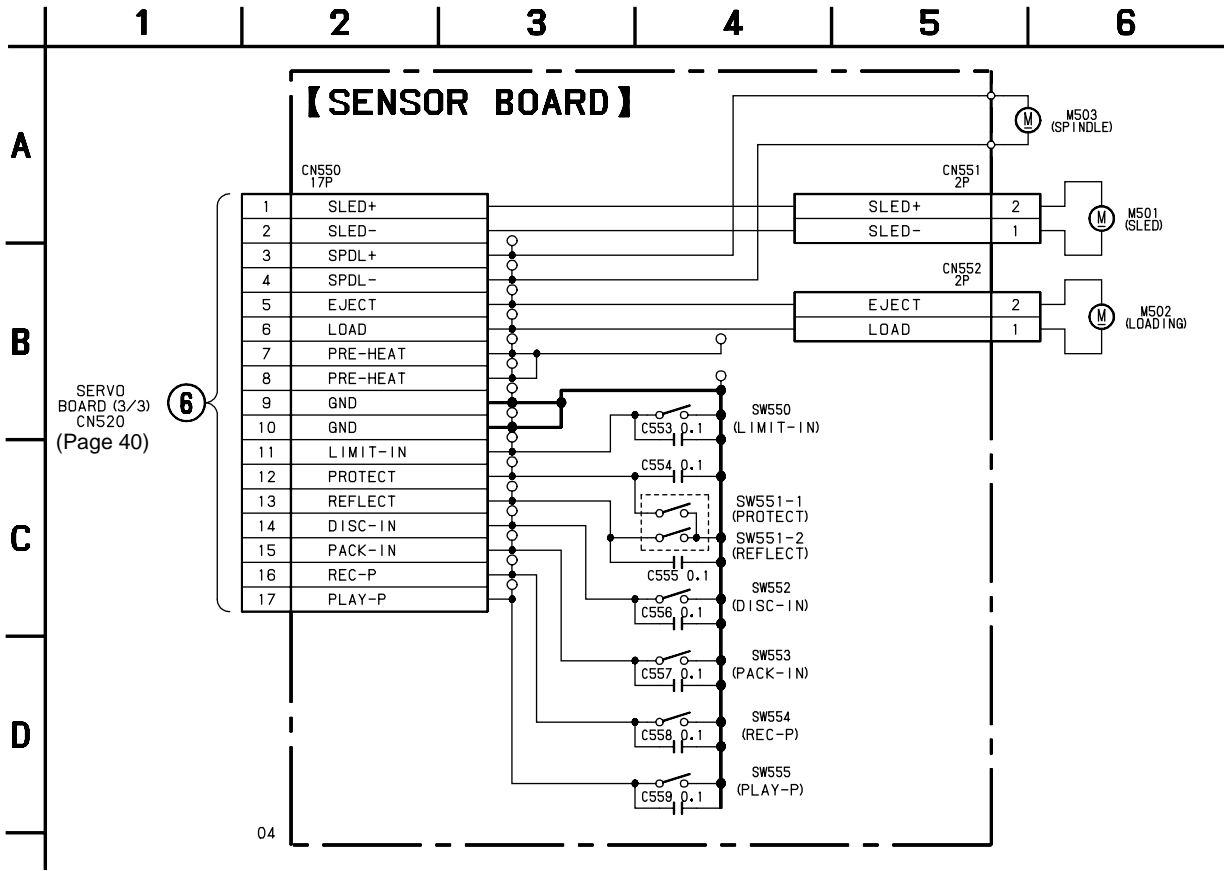
**Note:**  
• Voltage is dc with respect to ground under no-signal condition.  
no mark : MD PLAY  
( ) : MD REC



3-10. PRINTED WIRING BOARD — SENSOR SECTION —



3-11. SCHEMATIC DIAGRAM — SENSOR SECTION —

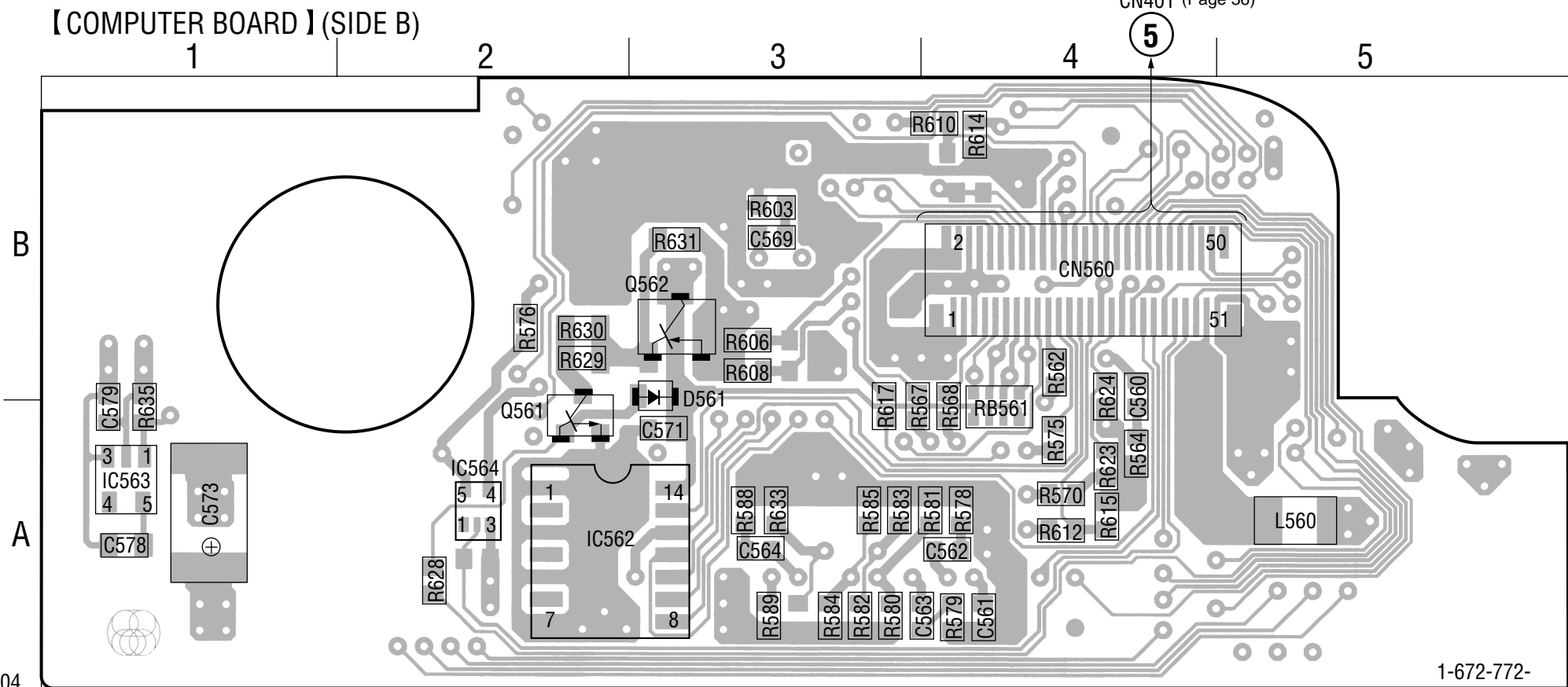
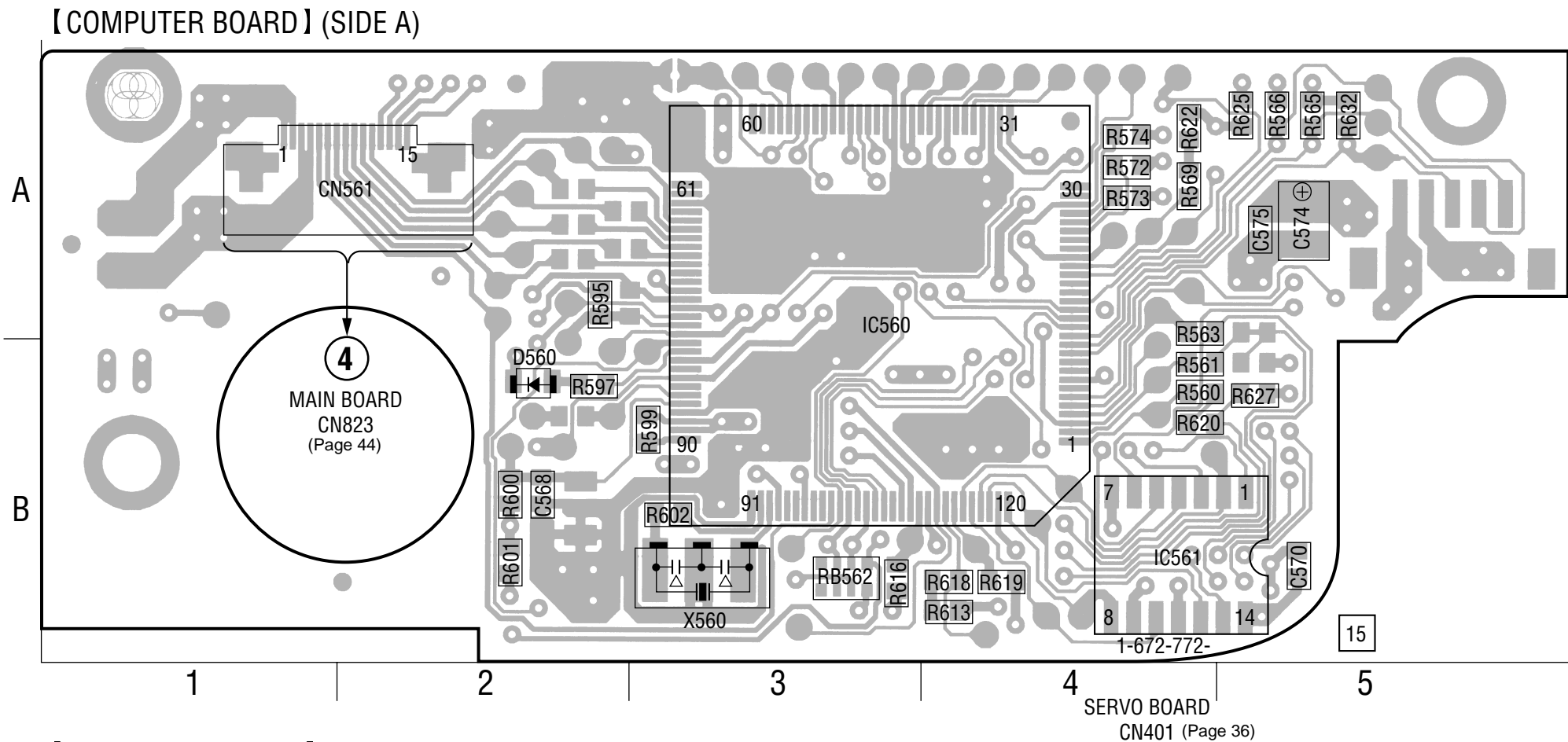


### 3-12. PRINTED WIRING BOARD — COMPUTER SECTION —

- **Semiconductor Location**

Ref. No.	Location
D560	B-2
(D561)	A-3
IC560	A-3
IC561	B-4
(IC562)	A-2
(IC563)	A-1
(IC564)	A-2
(Q561)	A-2
(Q562)	B-3

( ) : SIDE B



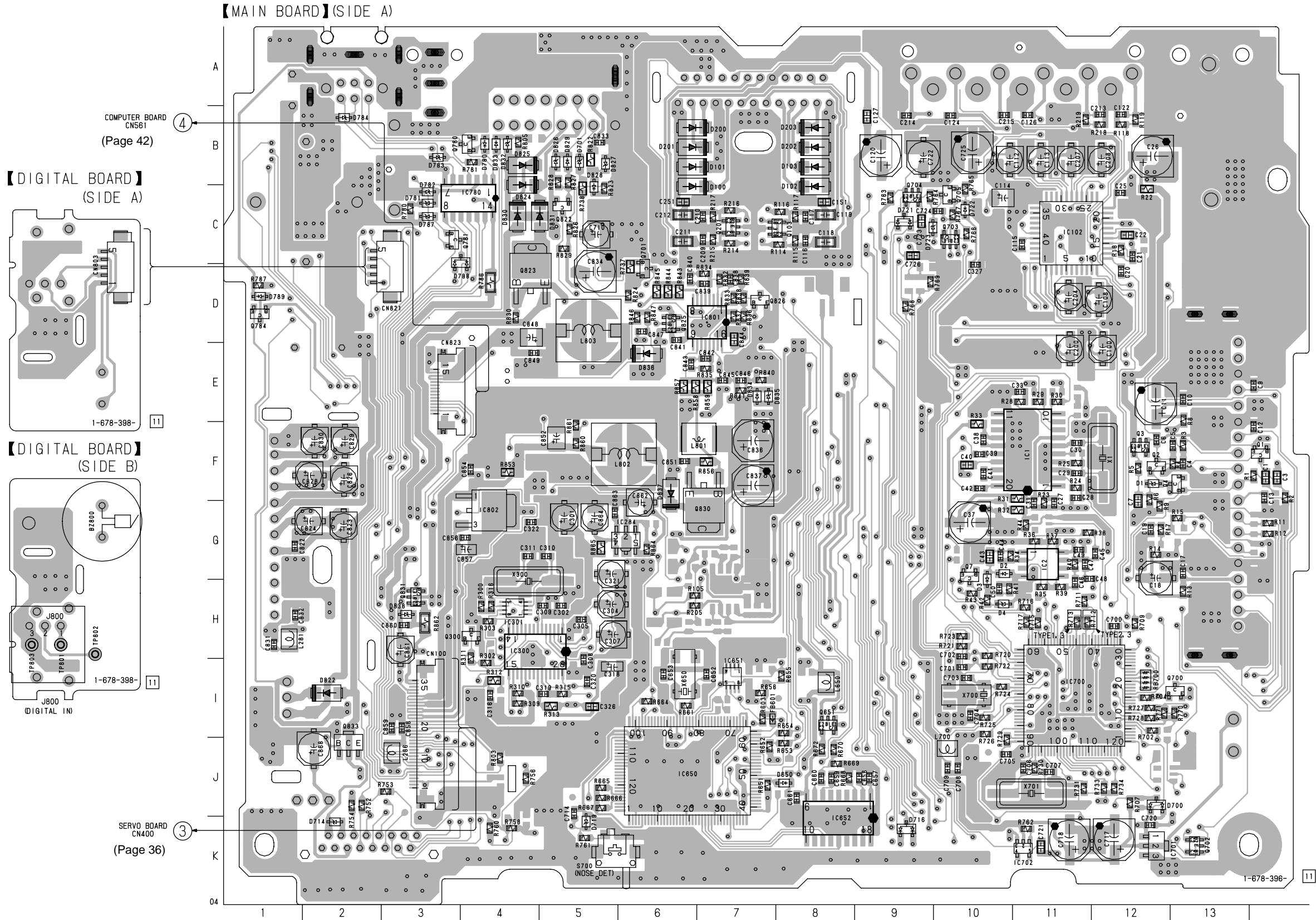
- Refer to page 54 for IC Block Diagrams.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----

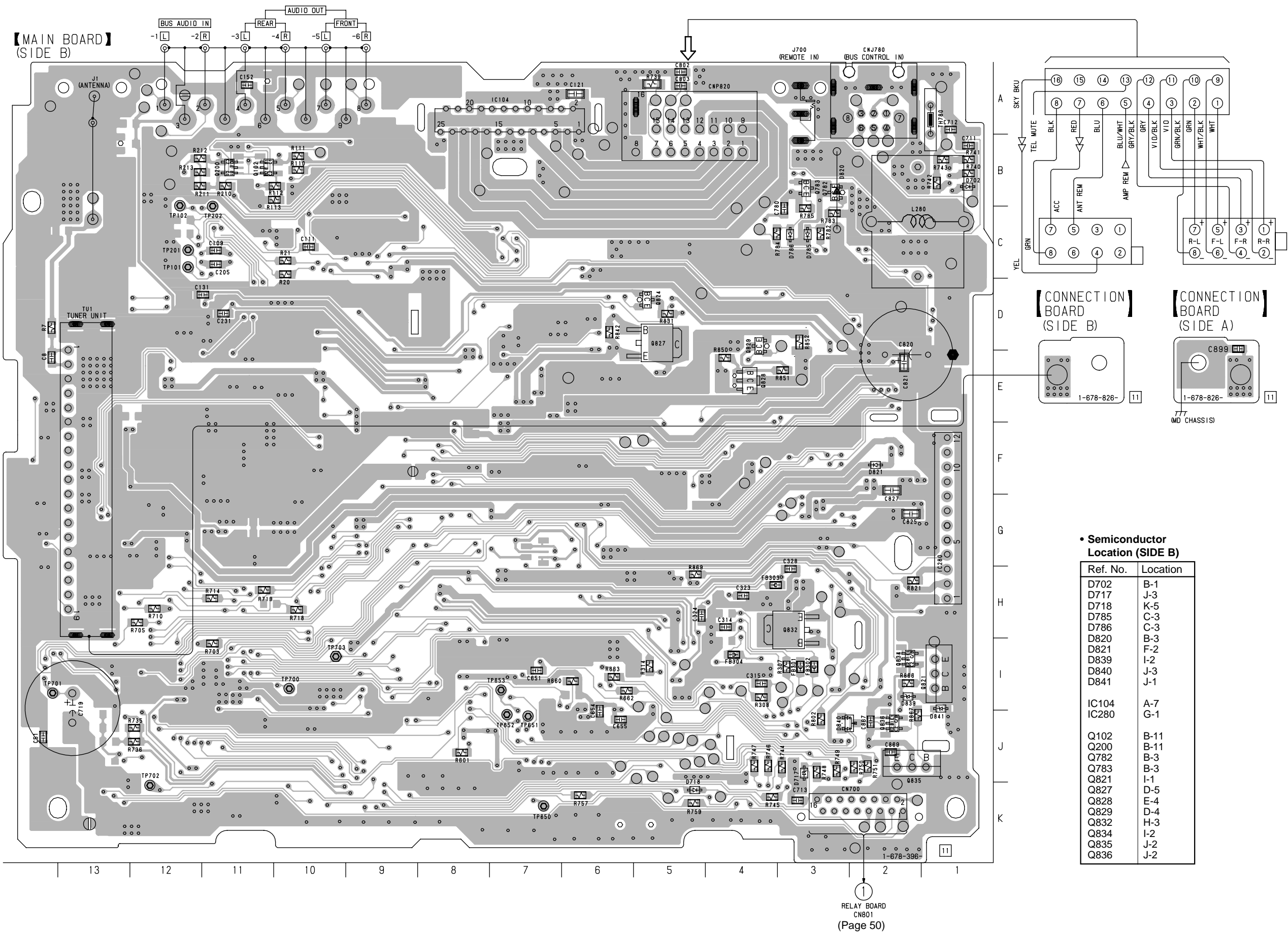
• Semiconductor  
Location (SIDE A)

Ref. No.	Location
D1	F-12
D2	G-10
D3	H-10
D4	H-10
D100	B-7
D101	B-7
D102	B-8
D103	B-8
D200	B-7
D201	B-6
D202	B-8
D203	B-8
D650	J-8
D700	J-13
D701	B-5
D714	K-2
D716	K-9
D719	K-5
D721	C-9
D722	C-10
D723	C-9
D780	B-4
D781	C-3
D782	C-3
D783	B-3
D784	B-2
D787	C-3
D788	D-4
D789	D-1
D822	I-2
D824	C-4
D825	B-4
D826	B-5
D827	B-5
D828	B-5
D829	B-5
D830	C-4
D831	C-5
D832	B-4
D833	B-4
D834	E-7
D835	E-7
D836	E-6
D837	F-6
D838	H-3
IC1	F-11
IC2	G-11
IC102	C-11
IC284	G-6
IC300	H-4
IC301	H-4
IC650	J-6
IC651	H-7
IC652	K-8
IC700	I-11
IC701	K-13
IC702	K-11
IC780	C-4
IC801	D-7
IC802	G-4
Q1	F-13
Q2	F-12
Q3	F-12
Q4	F-12
Q7	G-10
Q103	C-8
Q201	C-7
Q300	H-3
Q651	I-8
Q700	I-13
Q701	C-6
Q702	K-13
Q703	C-10
Q704	B-9
Q705	C-10
Q780	B-4
Q781	C-4
Q784	D-1
Q822	C-5
Q823	D-4
Q825	D-6
Q826	D-7
Q830	G-7
Q831	H-3
Q833	I-2

3-14. PRINTED WIRING BOARDS — MAIN SECTION —





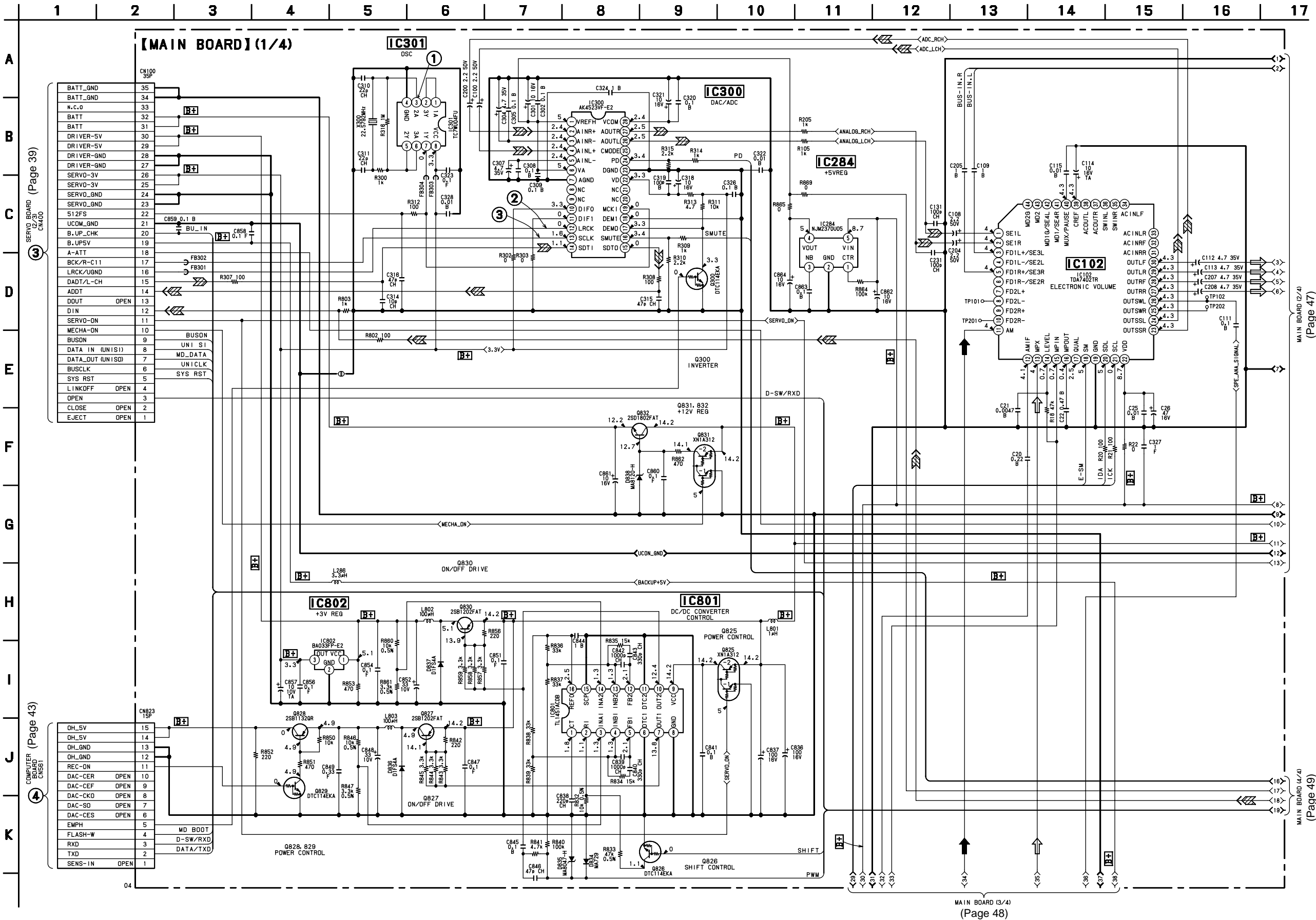


• Semiconductor  
Location (SIDE B)

Ref. No.	Location
D702	B-1
D717	J-3
D718	K-5
D785	C-3
D786	C-3
D820	B-3
D821	F-2
D839	I-2
D840	J-3
D841	J-1
IC104	A-7
IC280	G-1
Q102	B-11
Q200	B-11
Q782	B-3
Q783	B-3
Q821	I-1
Q827	D-5
Q828	E-4
Q829	D-4
Q832	H-3
Q834	I-2
Q835	J-2
Q836	J-2

• Refer to page 51 for Waveforms.

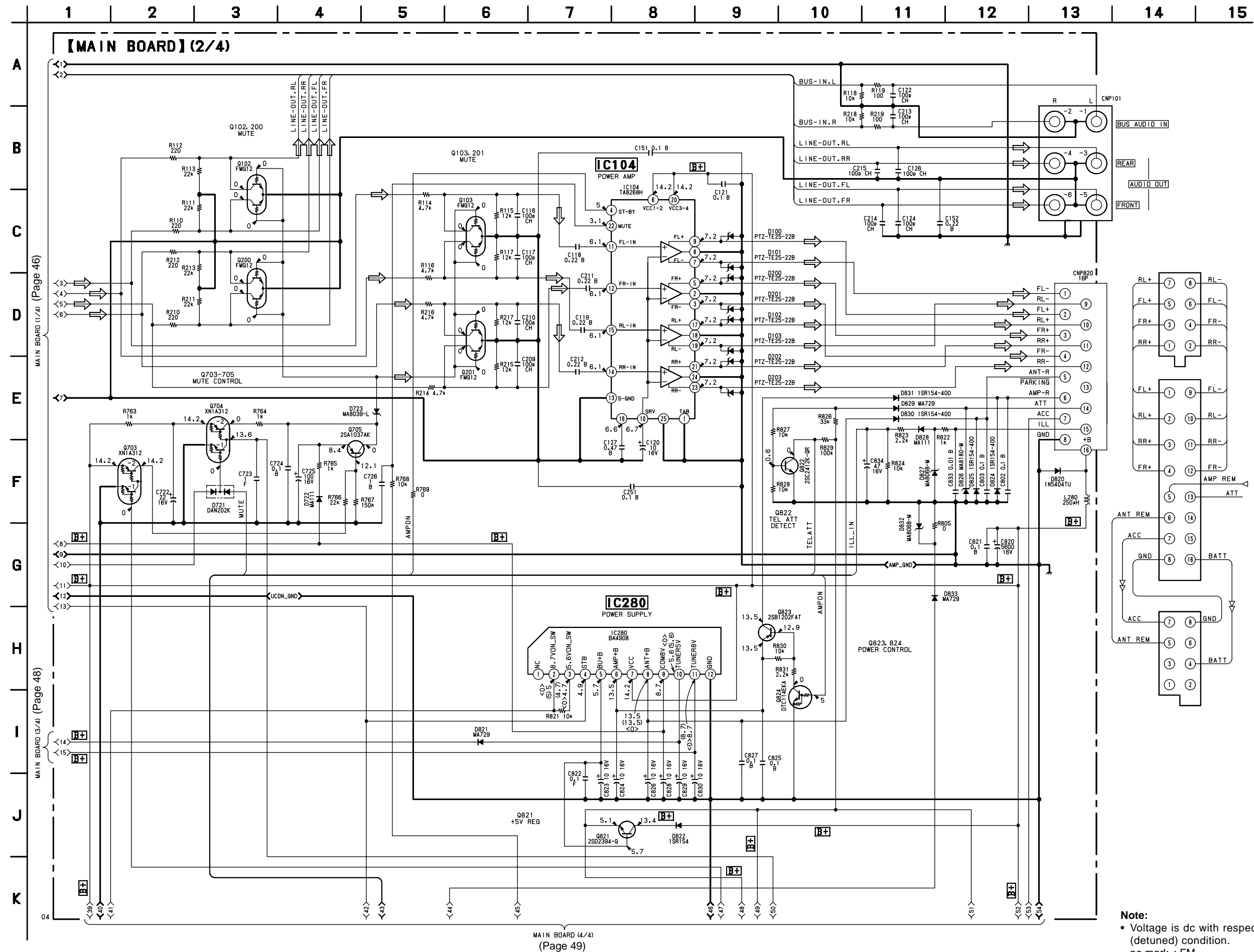
3-15. SCHEMATIC DIAGRAM — MAIN SECTION (1/4) — • Refer to page 54 for IC Block Diagrams.



**Note:**  
• Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM



**3-16. SCHEMATIC DIAGRAM — MAIN SECTION (2/4) — • Refer to page 54 for IC Block Diagrams.**



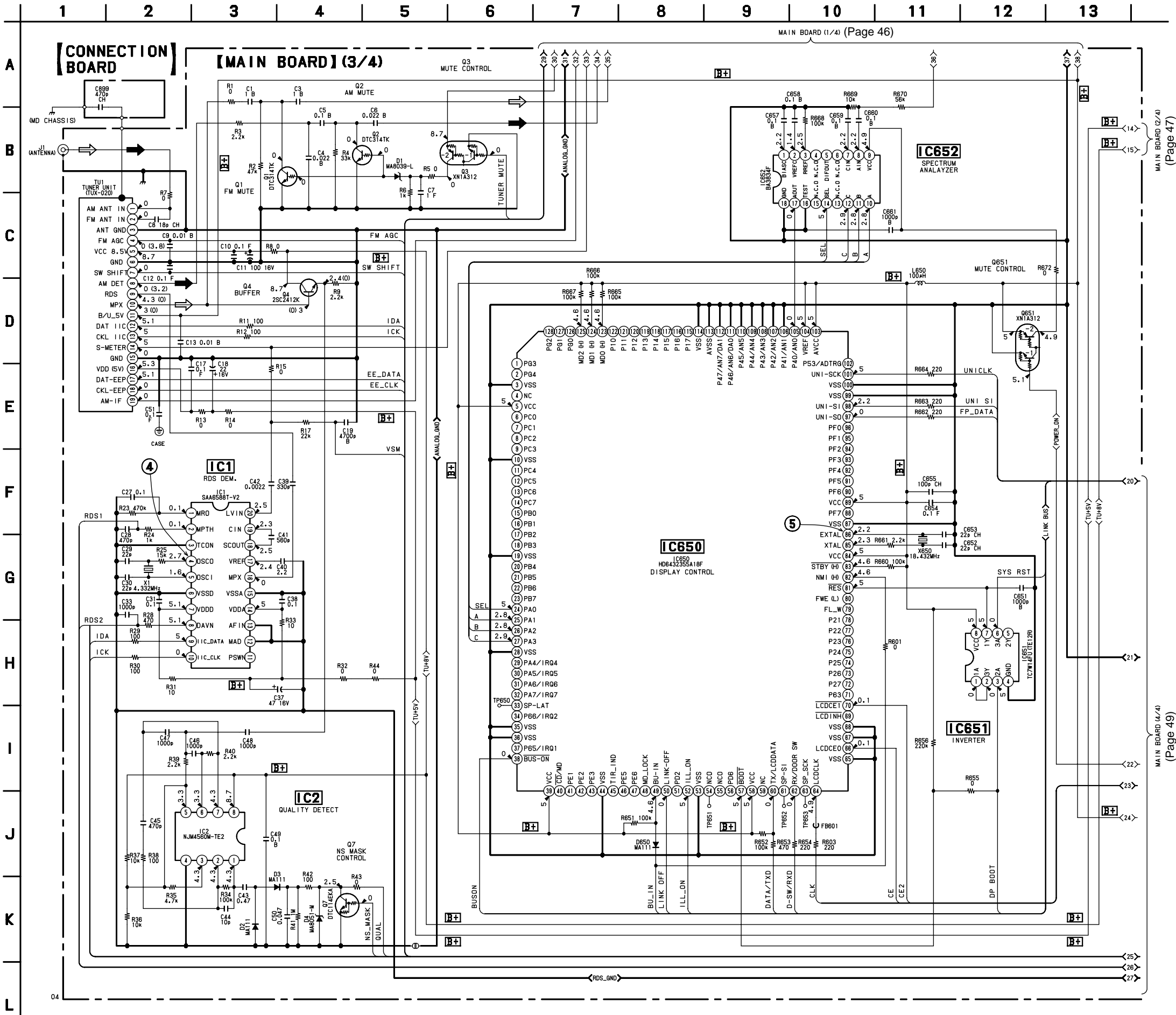
**Note:**

- Voltage is dc with respect to ground under no-signal (detuned) condition.

no mark : FM

• Refer to page 51 for Waveforms.

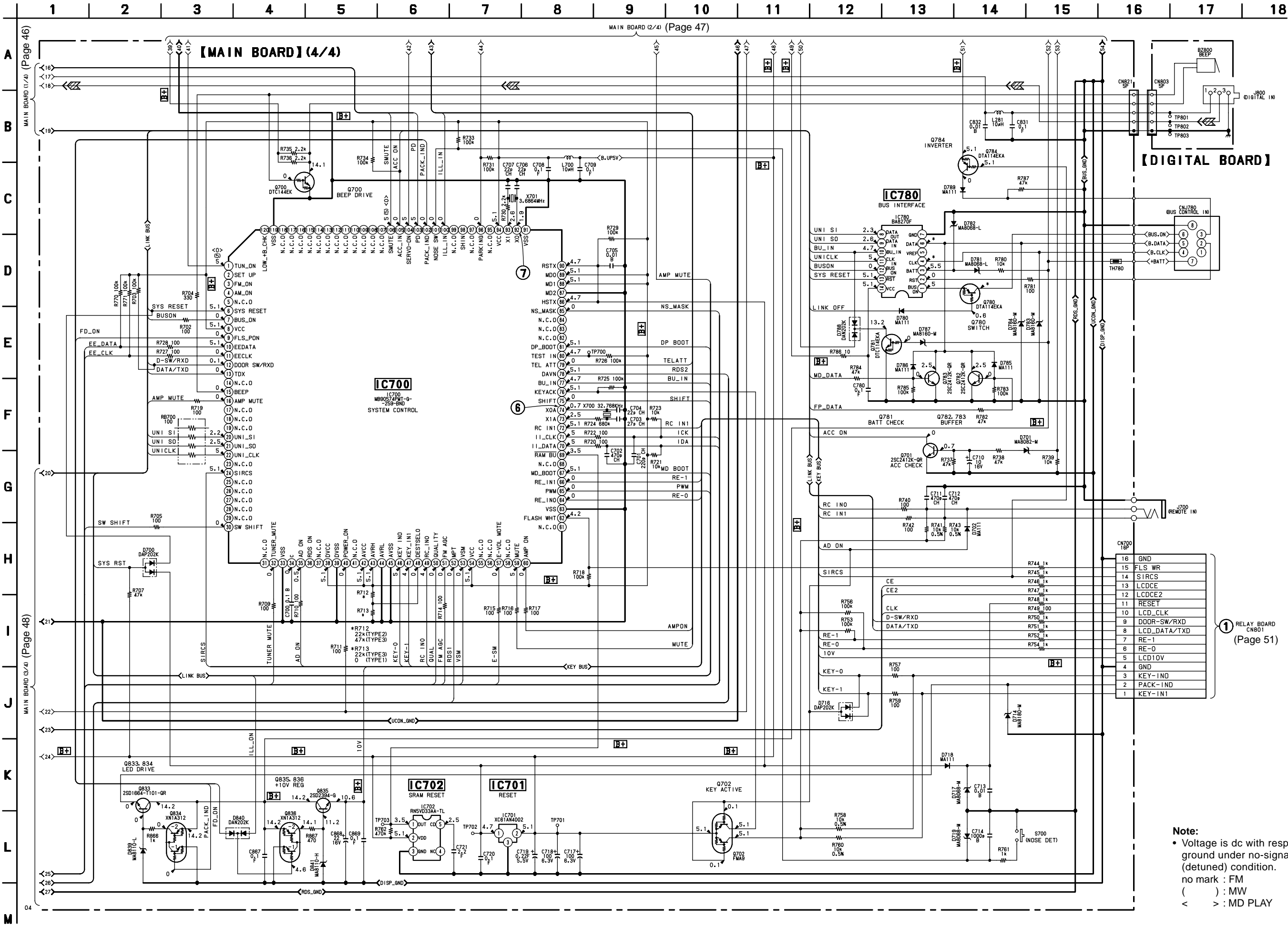
3-17. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) — • Refer to page 54 for IC Block Diagrams.



**Note:**  
• Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM  
( ) : MW

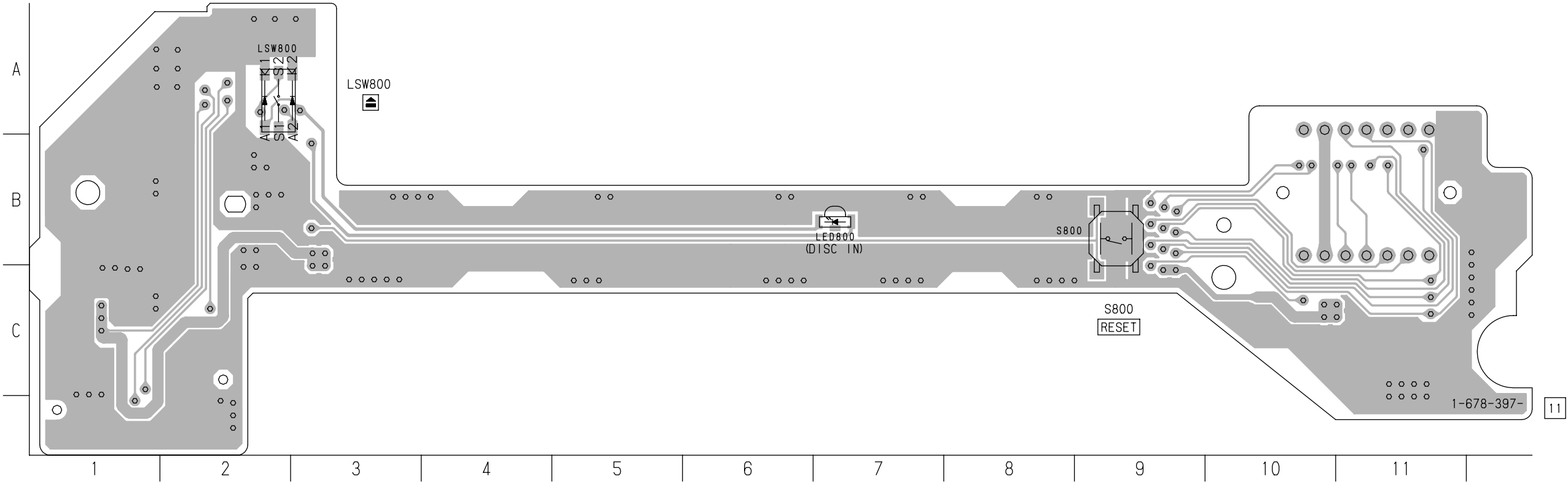
• Refer to page 51 for Waveforms.

3-18. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) — • Refer to page 54 for IC Block Diagrams.

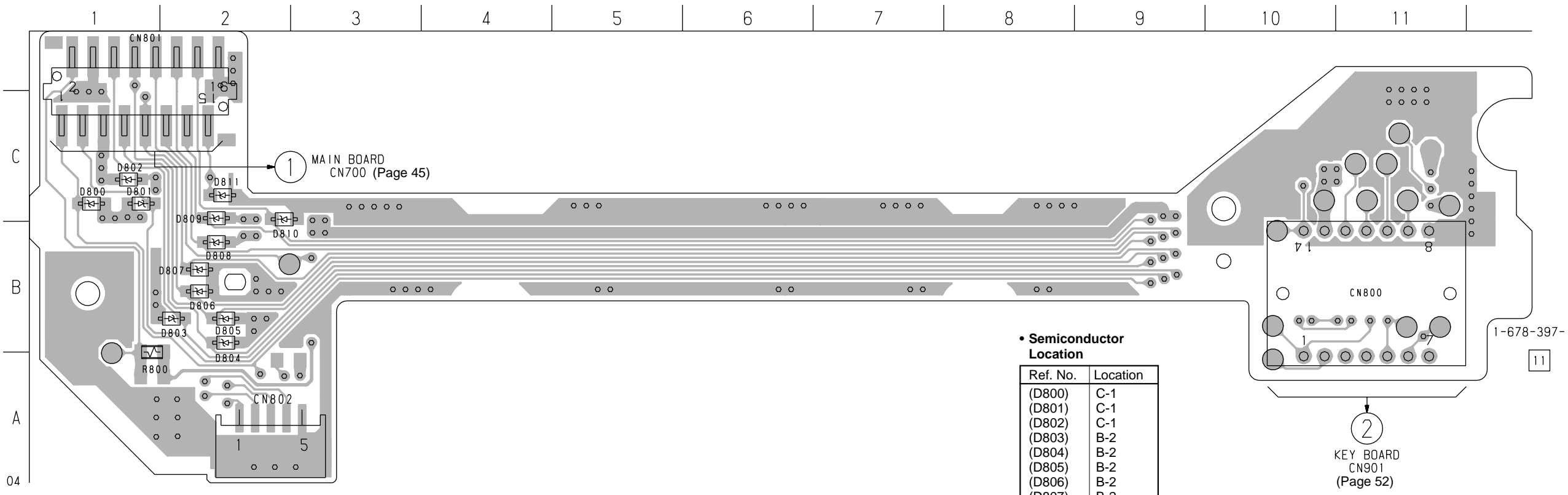


3-19. PRINTED WIRING BOARD — RELAY SECTION —

【RELAY BOARD】(SIDE A)



【RELAY BOARD】(SIDE B)



• Semiconductor Location

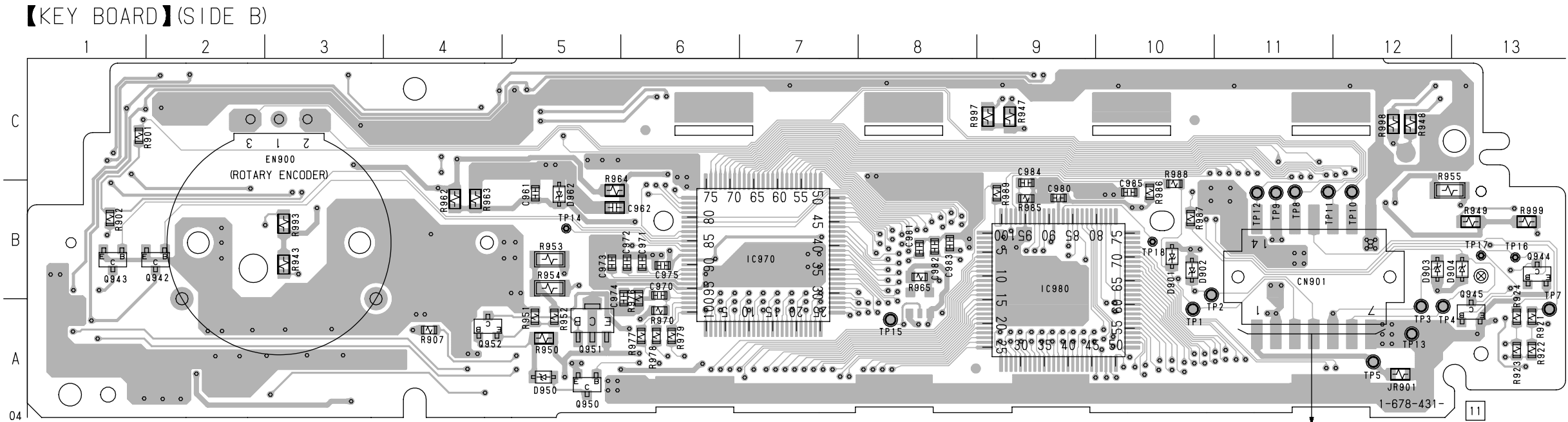
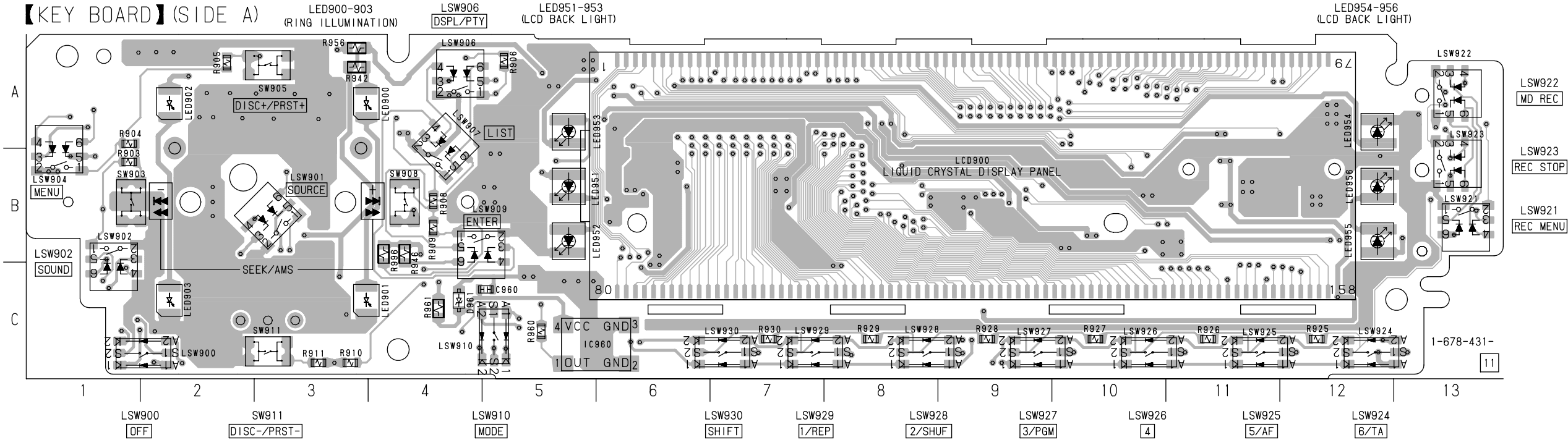
Ref. No.	Location
(D800)	C-1
(D801)	C-1
(D802)	C-1
(D803)	B-2
(D804)	B-2
(D805)	B-2
(D806)	B-2
(D807)	B-2
(D808)	B-2
(D809)	B-2
(D810)	B-2
(D811)	C-2
LED800	B-7

( ) : SIDE B





3-21. PRINTED WIRING BOARD — KEY SECTION —



2  
RELAY BOARD  
CN800  
(Page 50)

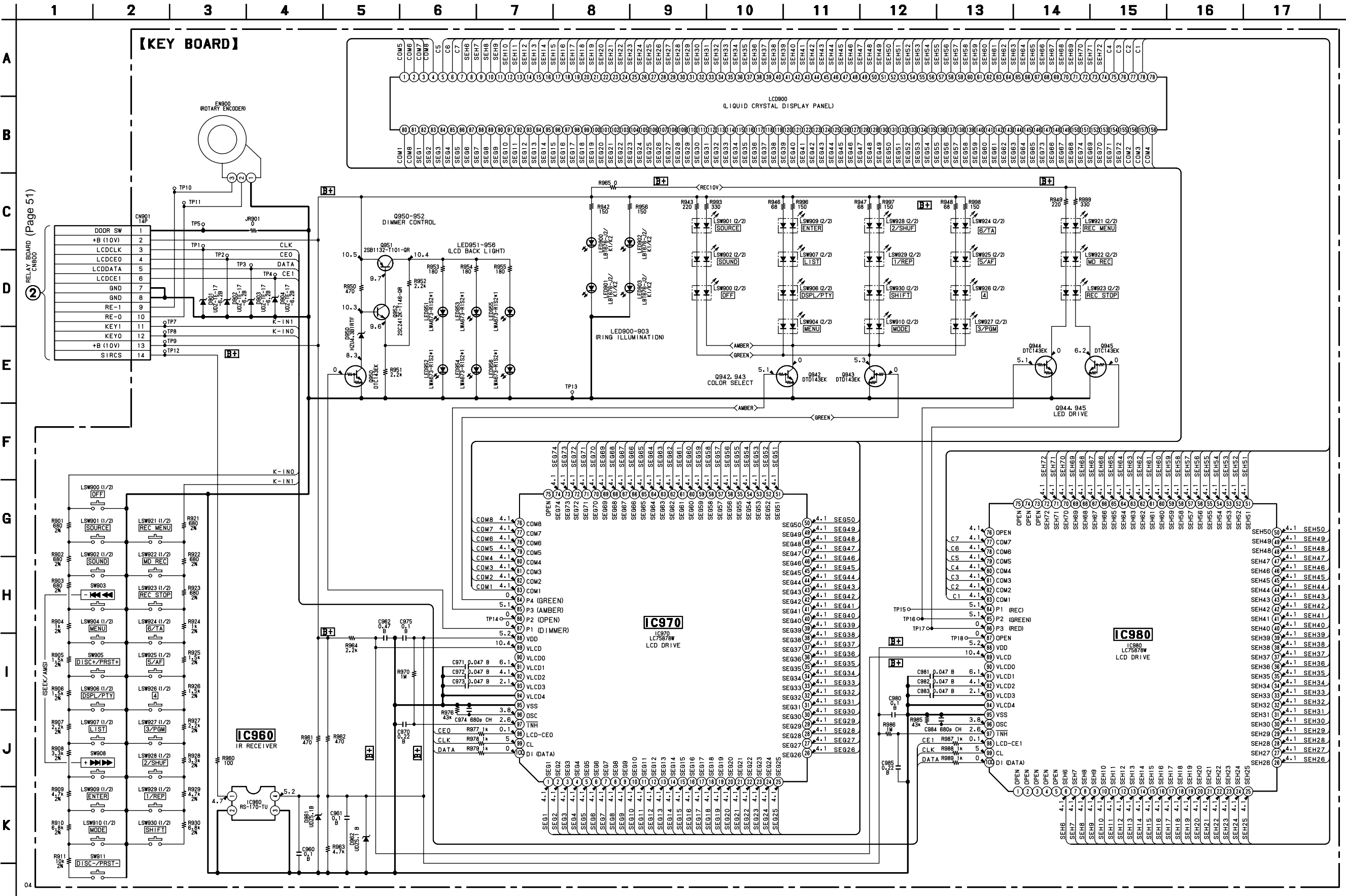
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
(D901)	B-10	LED903	C-2
(D902)	B-10	LED951	B-5
(D903)	B-12	LED952	B-5
(D904)	B-12	LED953	A-5
(D905)	A-5	LED954	A-12
D961	C-4	LED955	B-12
(D962)	B-5	LED956	B-12
IC960	C-6	(Q942)	B-2
(IC970)	B-7	(Q943)	B-1
(IC980)	B-9	(Q944)	B-13
		(Q945)	B-13
LED900	A-4	(Q950)	A-5
LED901	C-4	(Q951)	A-5
LED902	A-2	(Q952)	A-4

( ) : SIDE B



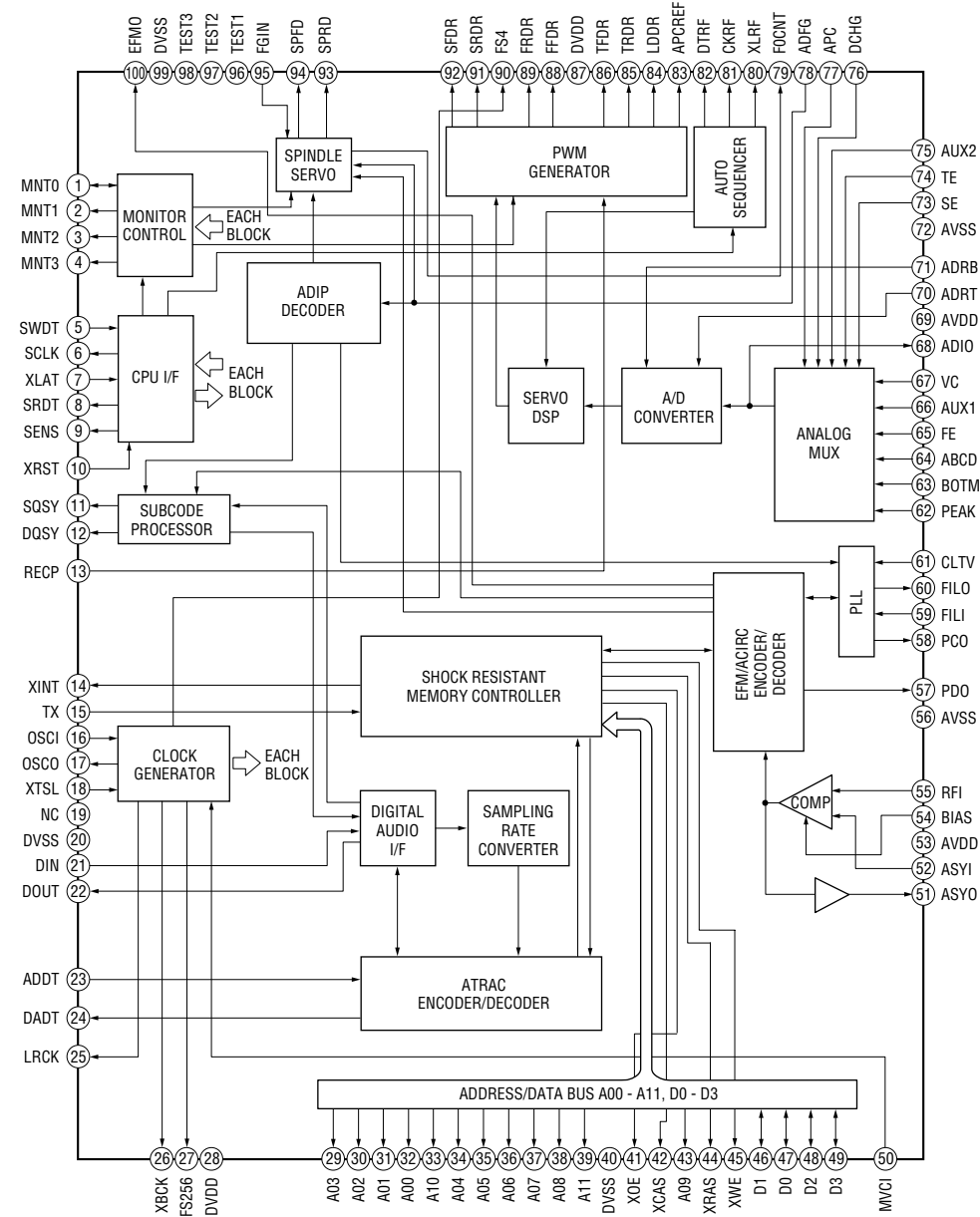
3-22. SCHEMATIC DIAGRAM — KEY SECTION —



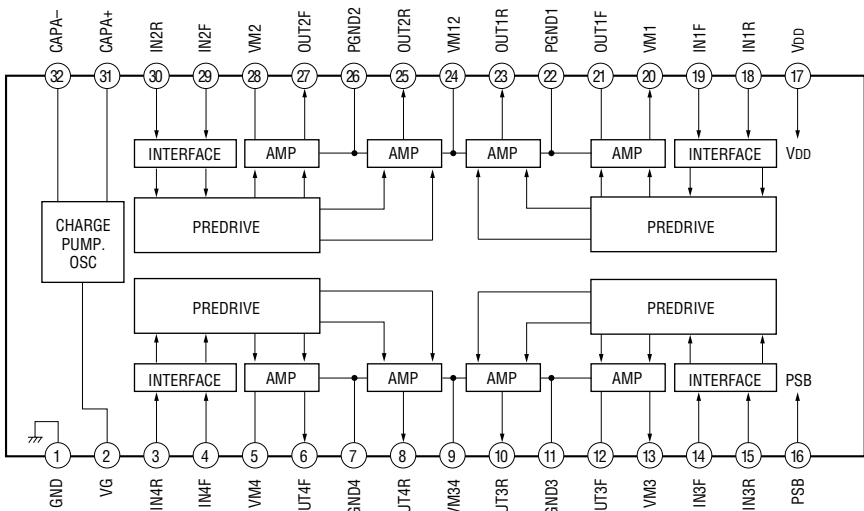
**Note:**  
• Voltage is dc with respect to ground under no-signal (detuned) condition.  
no mark : FM

• IC Block Diagrams

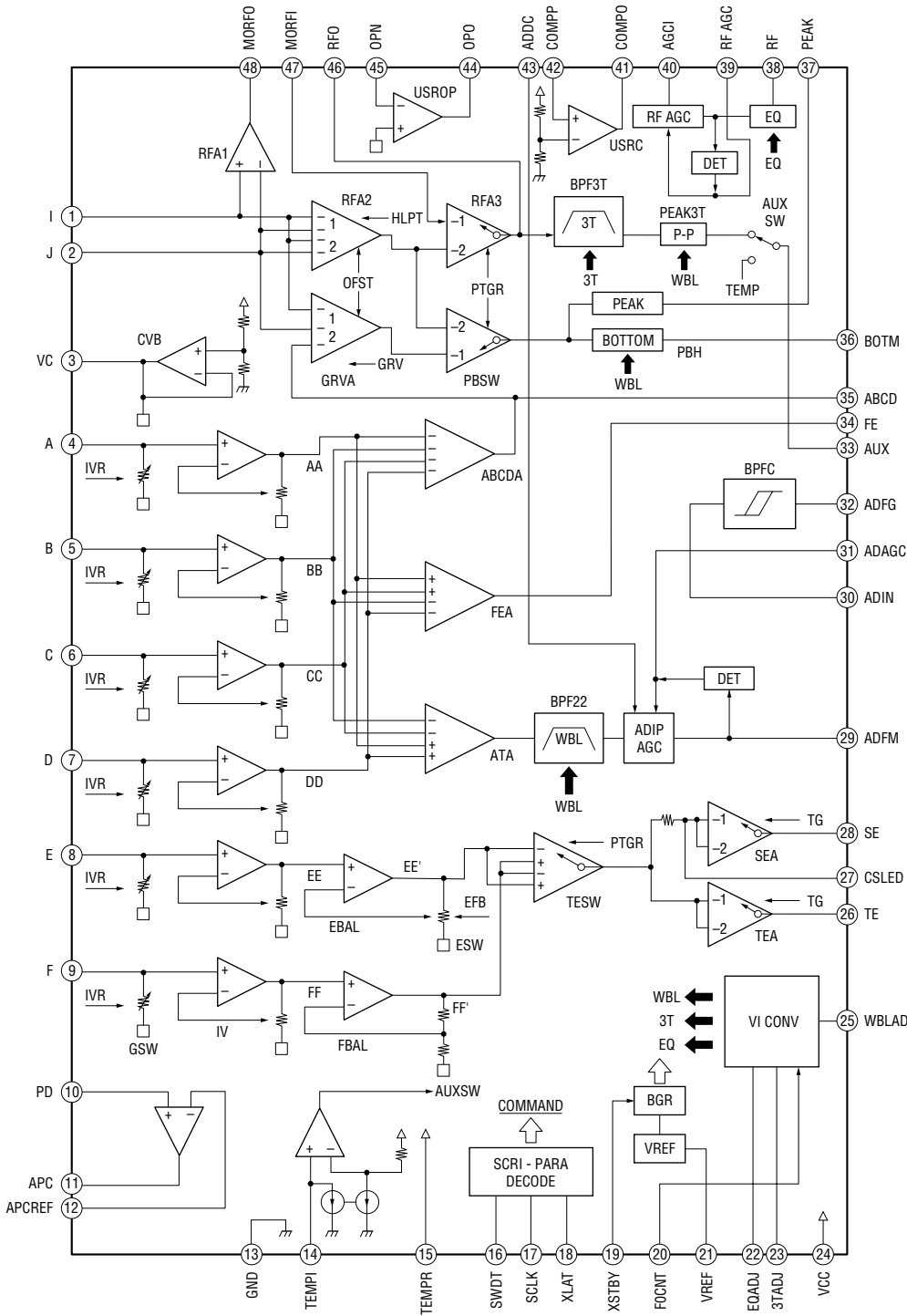
IC400 CXD2652AR



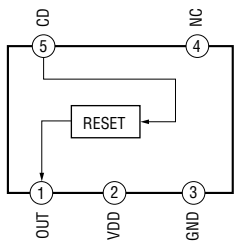
IC520 BH65111FS-E2



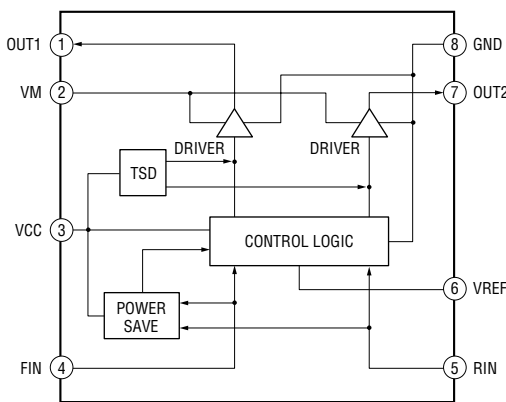
IC440 CXA2523AR



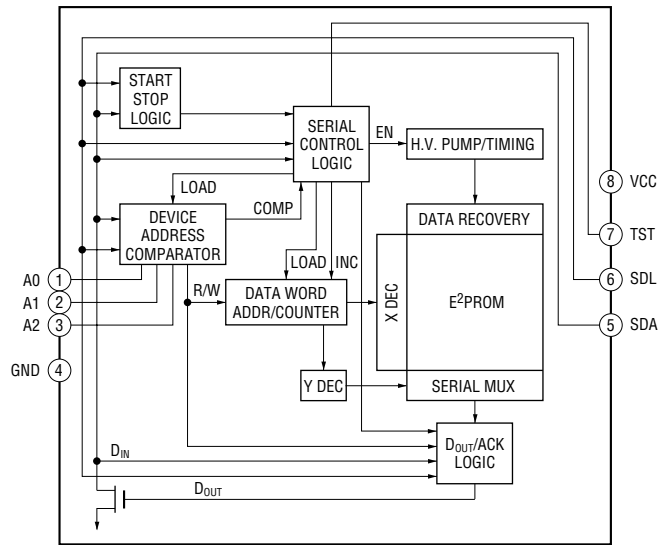
IC702 RN5VD33AA-TL



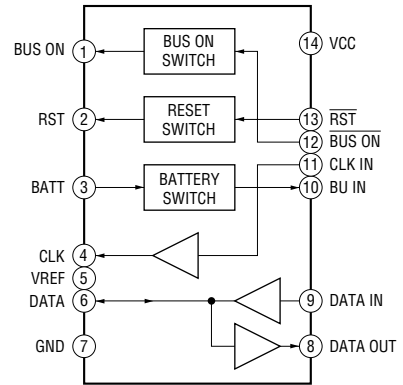
IC521 BA6287F-T1



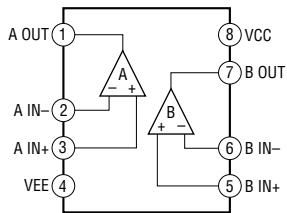
**IC402 AT24C16N-10SI-TR**



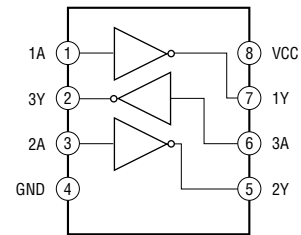
**IC780 BA8270F**



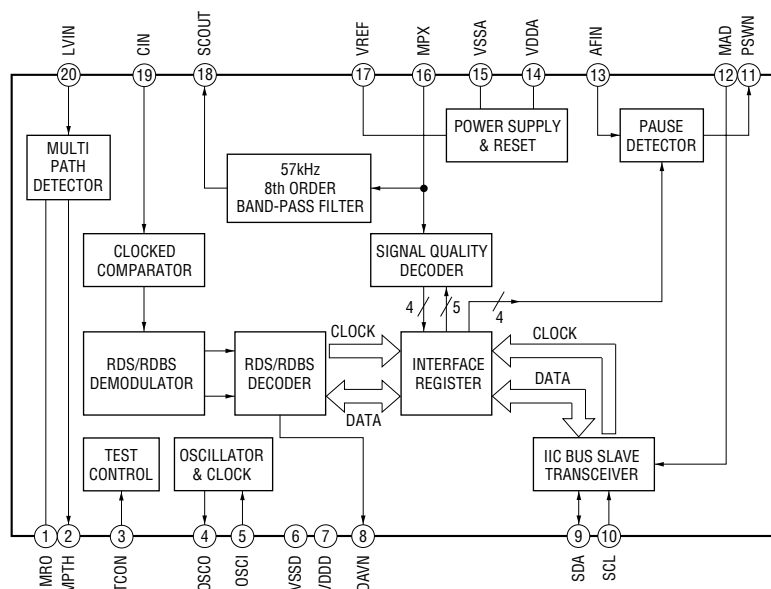
**IC2 NJM4560M-TE2**



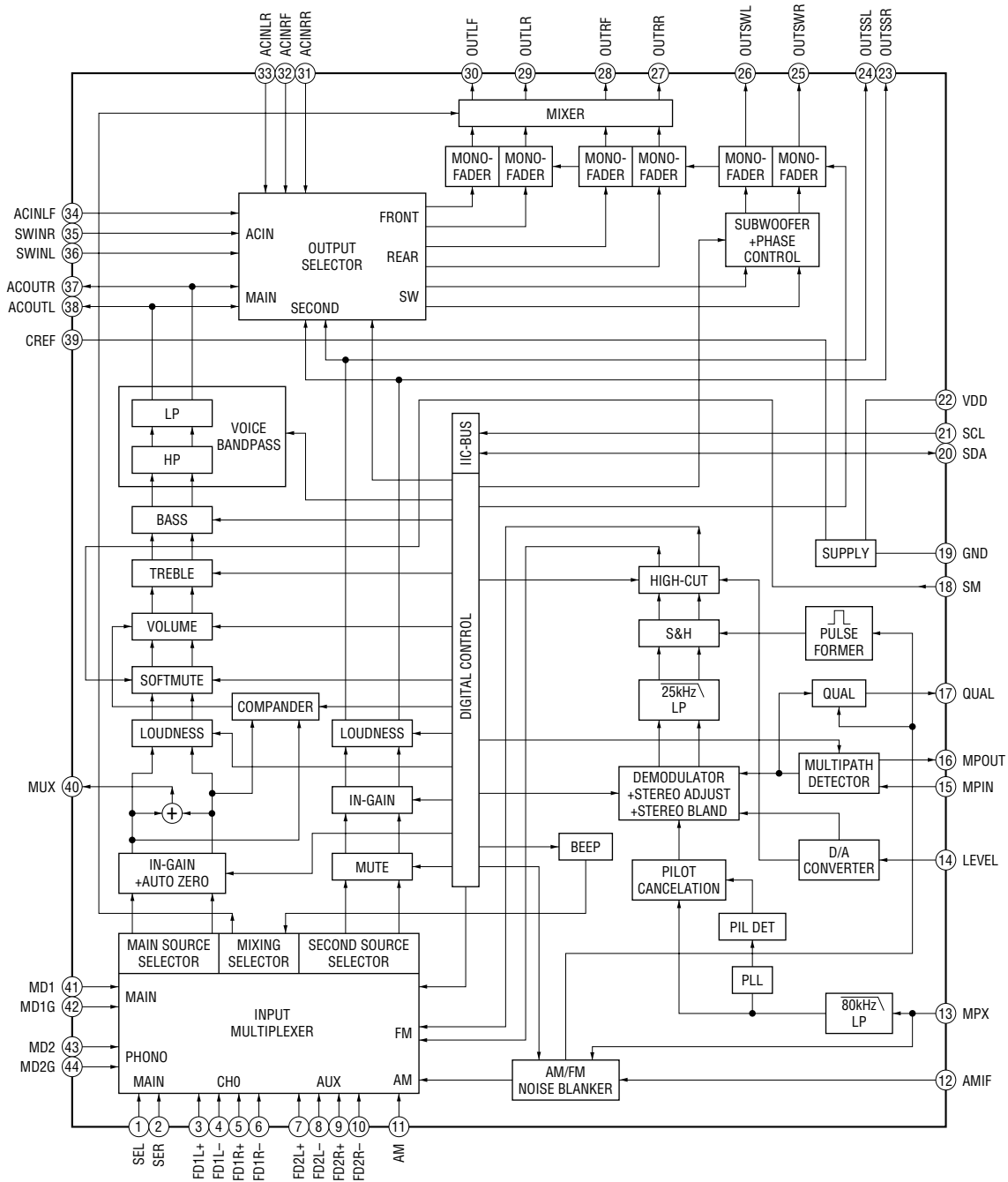
**IC301 TC7WU04FU**



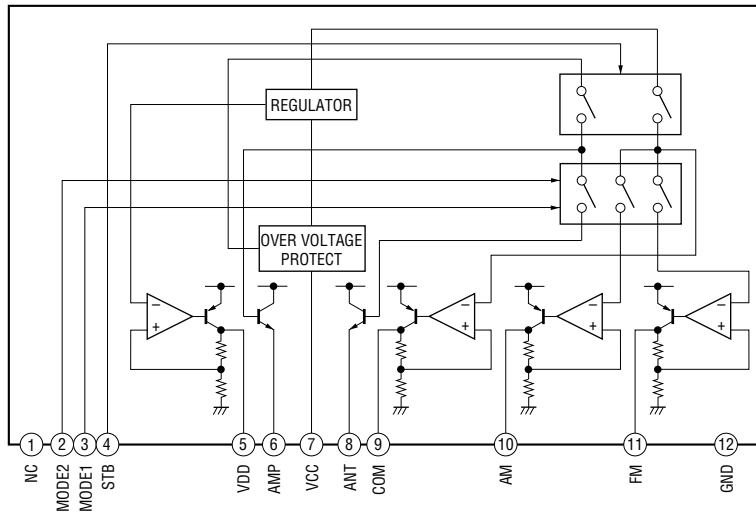
**IC1 SAA6588T-V2**



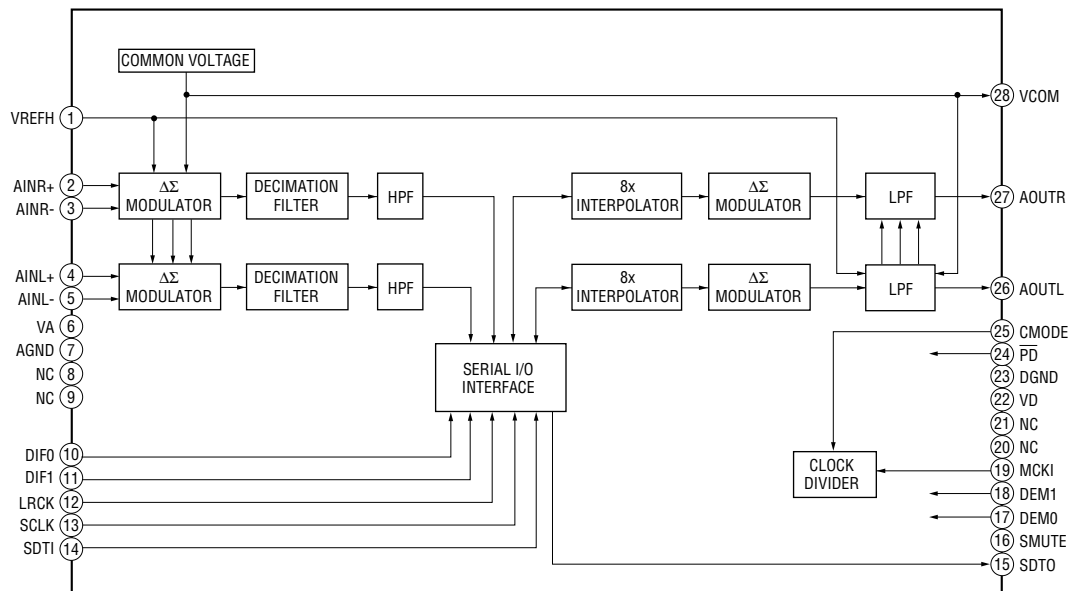
# IC102 TDA7402TR



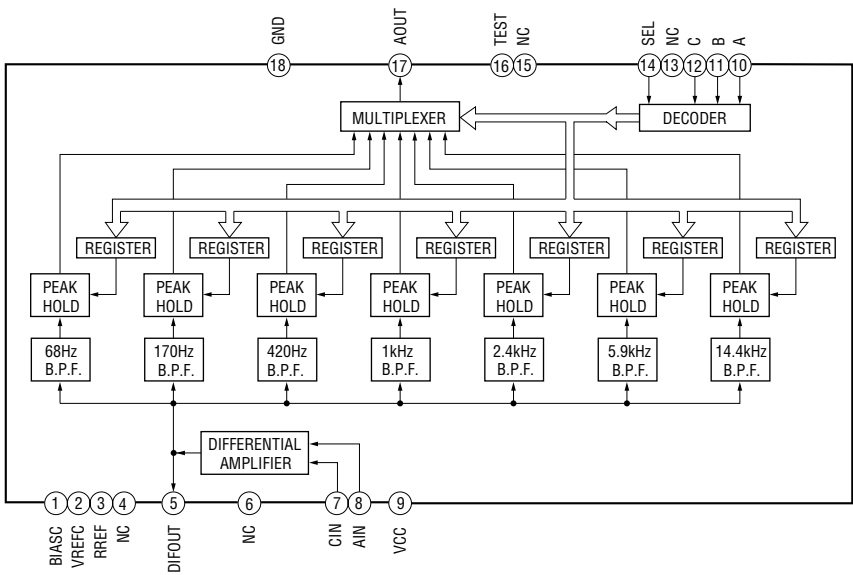
## IC280 BA4908



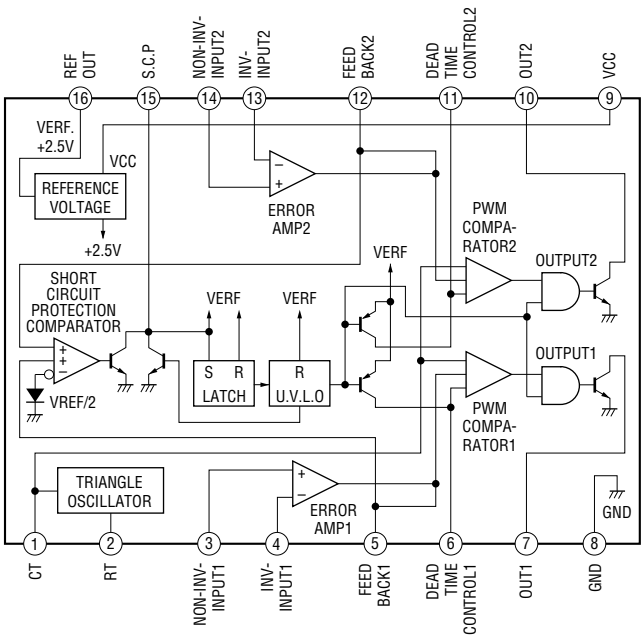
## IC300 AK4523VF-E2



IC652 BA3834F



IC801 TL1451ACDB





## SECTION 4 EXPLODED VIEWS

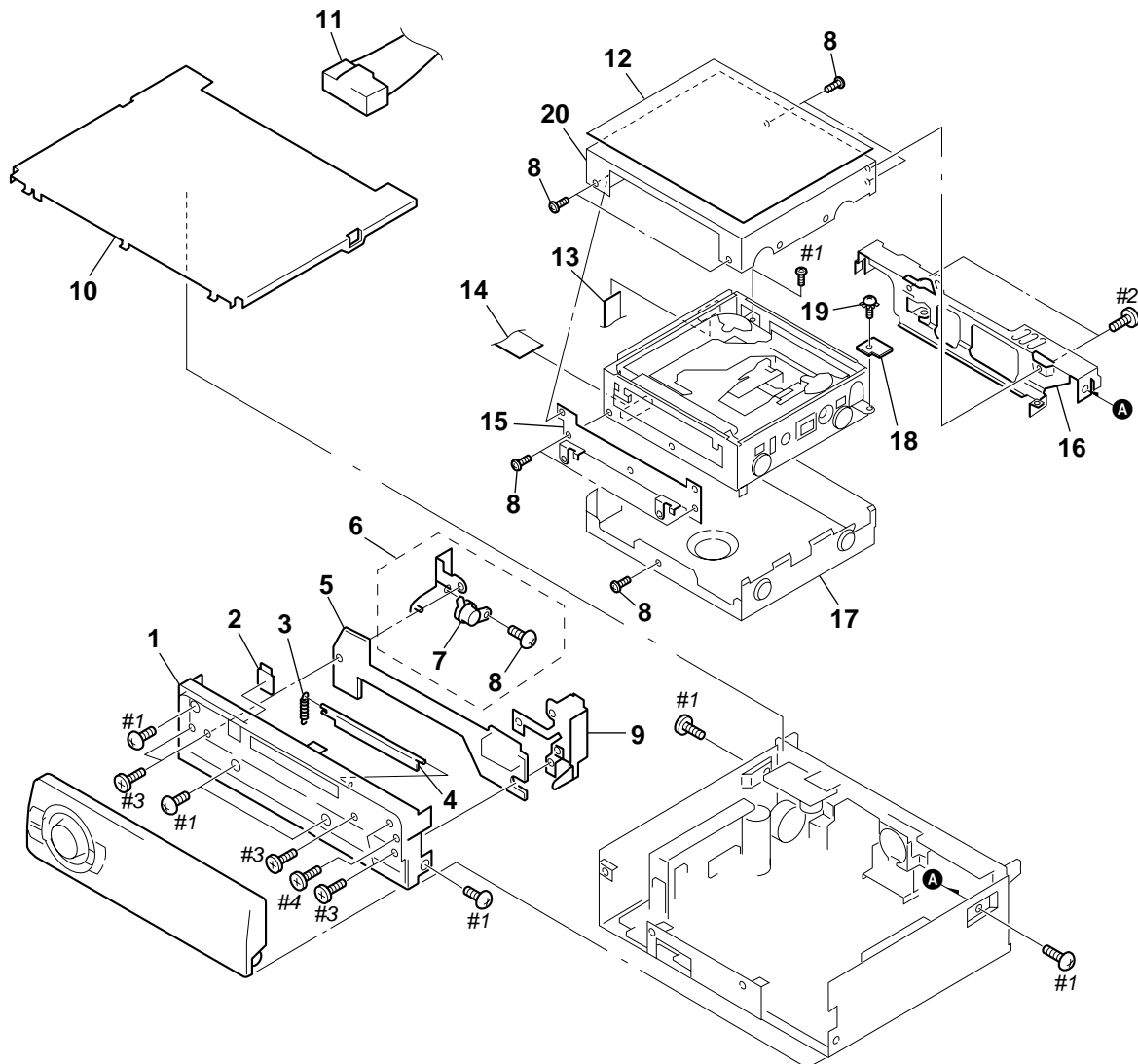
### NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts  
Example :  
KNOB, BALANCE (WHITE) ... (RED)  
↑                      ↑  
Parts Color    Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

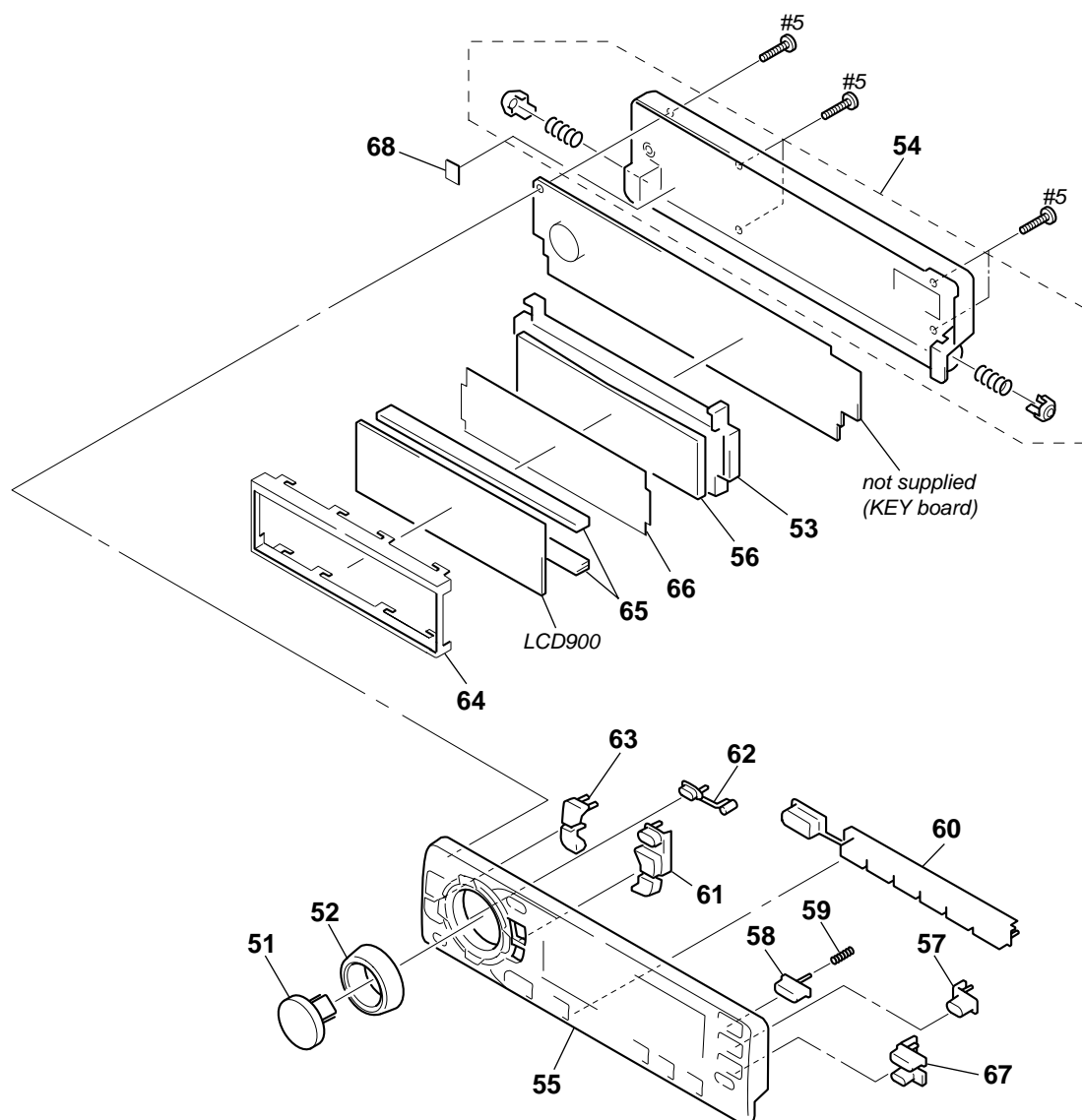
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

### 4-1. SUB PANEL SECTION



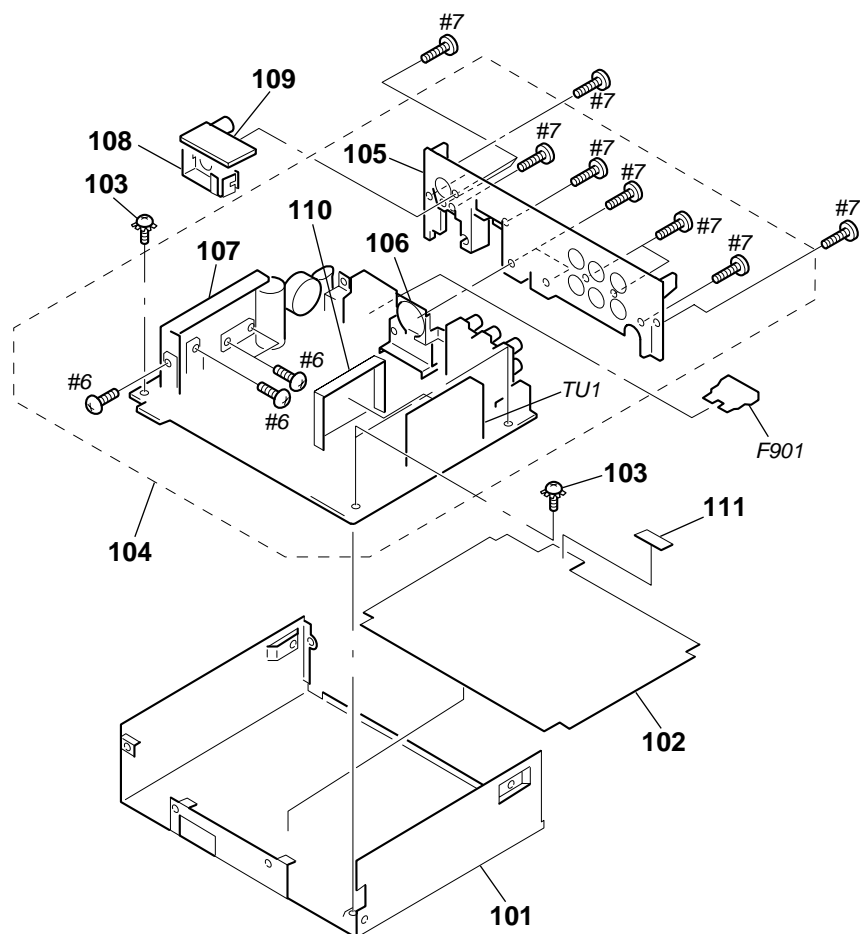
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3378-496-1	PANEL ASSY, SUB		11	1-790-926-31	CORD (WITH CONNECTOR) (POWER)	
2	3-040-990-01	BUTTON (EJECT)		* 12	3-047-278-01	SHEET (REC/MD)	
3	3-025-484-01	SPRING (DOOR)		13	1-791-560-11	CABLE, SHIELD FLEXIBLE FLAT	
4	3-039-574-21	DOOR (MD)		14	1-792-861-11	CABLE, FLEXIBLE FLAT	
5	1-678-397-11	RELAY BOARD		* 15	3-043-422-01	BRACKET (F) (MD)	
6	X-3376-699-2	GEAR ASSY		* 16	3-043-423-01	BRACKET (R) (MD)	
7	3-030-909-02	DAMPER, OIL		* 17	3-039-558-01	CASE (77), SHIELD	
8	3-713-786-51	SCREW +P 2X3		18	1-678-826-11	CONNECTION BOARD	
9	X-3377-621-2	LOCK ASSY		19	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 10	3-022-316-61	COVER		* 20	3-033-640-21	CASE (U), SHIELD	

## 4-2. FRONT PANEL SECTION



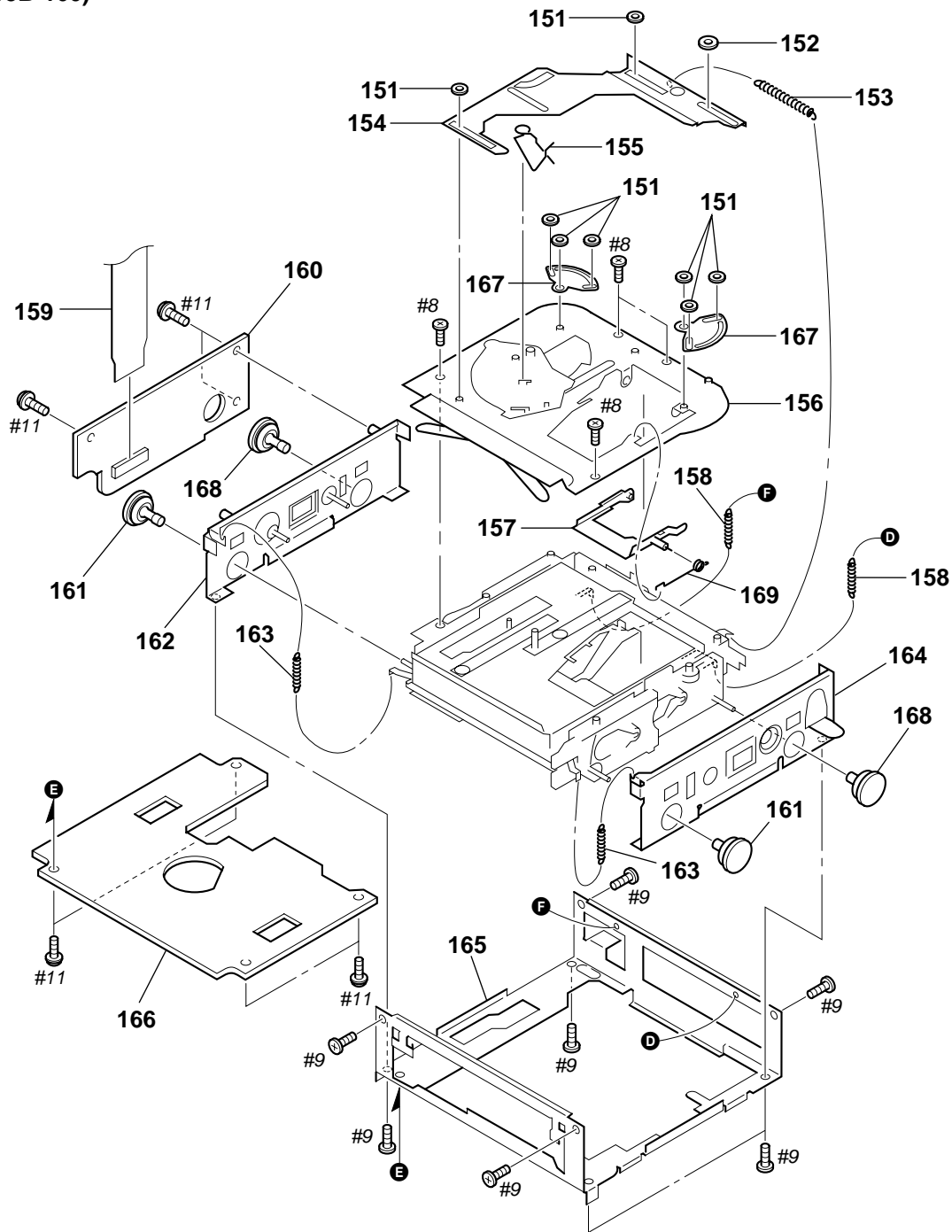
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-040-980-01	BUTTON (SOURCE)		61	3-041-003-01	BUTTON (LIST/ENTER)	
52	3-042-458-01	KNOB (VOL-DSO)		62	3-040-987-02	BUTTON (OFF)	
* 53	3-040-992-01	HOLDER (LCD)		63	3-040-986-01	BUTTON (MENU/SOUND)	
54	X-3378-498-1	PANEL ASSY, FRONT BACK		* 64	3-040-997-01	PLATE (LCD), GROUND	
55	X-3379-162-1	PANEL ASSY, FRONT		65	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
* 56	3-040-993-01	PLATE (LCD), LIGHT GUIDE		* 66	3-046-372-01	SHEET (REFLECTOR)	
57	3-041-005-21	BUTTON (D)		67	3-041-020-01	BUTTON (REC MENU)	
58	3-040-989-01	BUTTON (OPEN)		68	3-048-250-01	CUSHION (OFF)	
59	3-049-081-01	SPRING (OPEN)		LCD900	1-803-912-11	DISPLAY PANEL, LIQUID CRYSTAL	
60	3-041-019-01	BUTTON (1-6/S)					

4-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	3-022-311-41	CHASSIS		* 107	3-043-425-01	HEAT SINK (REG/REC)	
* 102	3-047-309-01	SHEET, INSULATING		* 108	3-043-421-01	BRACKET (PC BOARD)	
103	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		* 109	1-678-398-11	DIGITAL BOARD	
* 104	A-3294-968-A	MAIN BOARD, COMPLETE (TYPE1)		* 110	3-048-454-01	SHIELD (COVER)	
* 104	A-3294-970-A	MAIN BOARD, COMPLETE (TYPE2)		* 111	3-043-497-01	SHEET, INSLATING (2)	
* 104	A-3294-971-A	MAIN BOARD, COMPLETE (TYPE3)		F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
* 105	3-041-063-01	HEAT SINK (REC)		TU1	A-3220-738-A	TUNER UNIT (TUX-020)	
* 106	3-043-424-01	BRACKET (IC)					

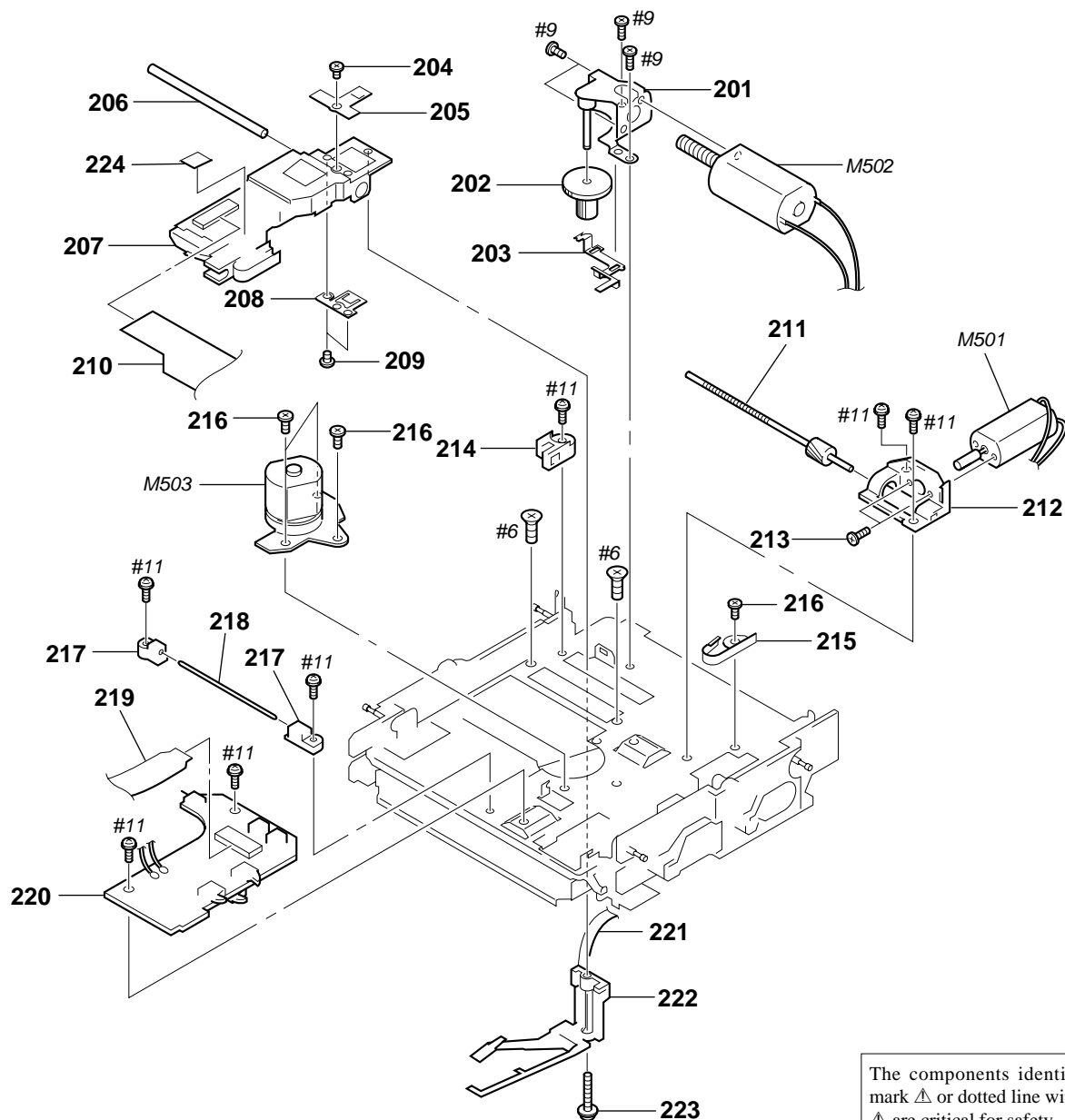
**4-4. MD MECHANISM SECTION (1)**  
**(MG-715B-160)**



Ref. No.	Part No.	Description	Remark
151	3-321-813-21	WASHER, COTTER POLYETHYLENE	
152	3-038-515-01	RING, RETAINING	
153	3-030-222-01	SPRING (T), TENSION	
154	3-030-191-01	SLIDER (T)	
155	3-030-198-03	SPRING (LIMITER), TORSION	
* 156	X-3376-408-3	CHASSIS (T) ASSY	
157	X-3376-415-1	ARM (OWH) ASSY	
158	3-030-195-01	SPRING (B), TENSION	
159	1-790-418-11	MICRO COMPUTER FLEXIBLE BOARD	
* 160	A-3317-980-A	COMPUTER BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
161	3-931-897-31	DAMPER (T)	
* 162	X-3376-409-1	CHASSIS (L) ASSY	
163	3-030-194-02	SPRING (F), TENSION	
* 164	X-3376-410-1	CHASSIS (R) ASSY	
* 165	3-030-174-12	CHASSIS (M)	
* 166	A-3326-079-A	SERVO BOARD, COMPLETE	
167	3-030-190-01	LEVER (LK)	
168	3-931-897-51	DAMPER (T)	
169	3-038-671-01	SPRING (OWH), TORSION	

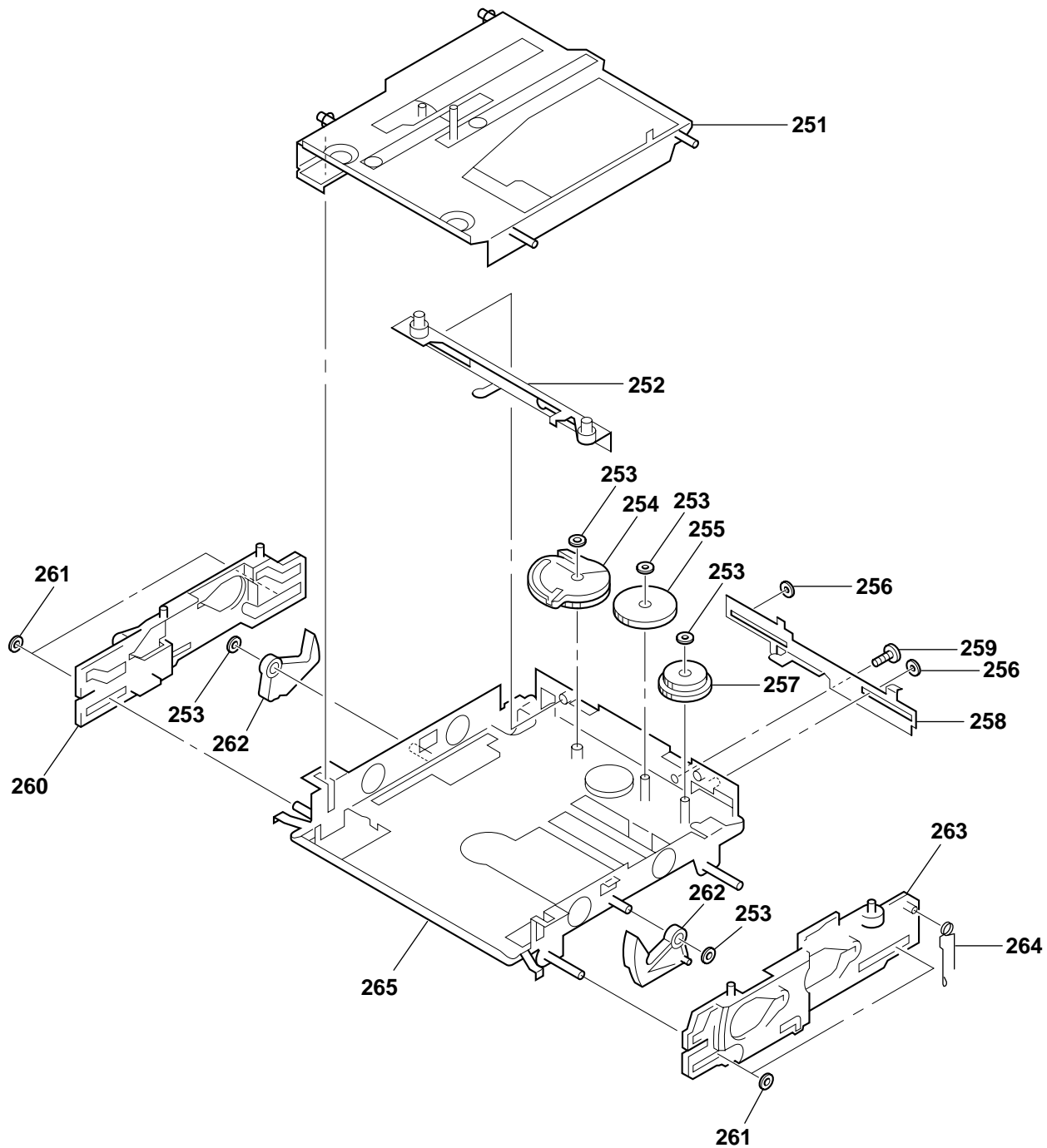
#### 4-5. MD MECHANISM SECTION (2) (MG-715B-160)



The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	X-3376-412-2	BRACKET (LD) ASSY		215	3-030-188-01	SPRING (SL), LEAF	
202	3-030-176-03	WHEEL (LD), WORM		216	3-965-550-02	SCREW (M1.7X1.6)	
203	3-030-197-02	LEVER (OPS)		217	3-030-187-01	BASE (SLB)	
204	3-342-375-11	SCREW (M1.7X1.4), SPECIAL		218	3-030-185-01	SHAFT (SLB)	
205	4-987-061-01	SPACER (RACK)		219	1-790-416-11	SENSOR FLEXIBLE BOARD	
206	4-996-265-01	SHAFT, MAIN		220	A-3317-305-A	SENSOR BOARD, COMPLETE	
$\triangle$ 207	8-583-057-02	PICK-UP, OPTICAL KMS-263A/J1N		221	1-790-434-11	OWH FLEXIBLE BOARD	
208	3-030-199-03	RACK (INSERT)		222	1-500-412-21	HEAD, OVER WRITE (RF325-74A)	
209	3-366-890-11	SCREW (M1.4)		223	4-988-560-01	SCREW (+P 1.7X6)	
210	1-790-417-11	OP FLEXIBLE BOARD		224	3-047-912-01	COVER, OP	
211	X-3376-559-1	SHAFT (FEED) ASSY		M501	X-3376-526-1	MOTOR ASSY, SLED (SLED)	
212	3-030-181-01	BRACKET (SL)		M502	X-3376-525-1	MOTOR ASSY, LOADING (LOADING)	
213	3-345-648-01	SCREW (M1.4X3)		M503	A-3301-942-A	MOTOR ASSY, SPINDLE (SPINDLE)	
214	3-030-186-01	BASE (SLA)					

**4-6. MD MECHANISM SECTION (3)**  
**(MG-715B-160)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	X-3376-418-7	HOLDER ASSY		259	3-880-990-00	SCREW (1.7X3), FLAT, (+) SPECIAL	
252	X-3376-413-2	SLIDER (LK) ASSY		260	X-3376-420-4	SLIDER (L) ASSY	
253	3-321-813-21	WASHER, COTTER POLYETHYLENE		261	3-038-514-01	RING, RETAINING	
254	3-030-180-01	GEAR (CAM)		262	3-030-189-01	LEVER (HOOK)	
255	3-030-178-03	GEAR (LD2)		263	X-3376-421-2	SLIDER (R) ASSY	
256	3-038-515-01	RING, RETAINING		264	3-030-223-01	SPRING (OPS), TORSION	
257	3-030-177-02	GEAR (LD1)		265	X-3376-406-5	CHASSIS (OP) ASSY	
258	X-3376-414-1	SLIDER (LD) ASSY					



## SECTION 5 ELECTRICAL PARTS LIST

### COMPUTER

#### NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u :  $\mu$ , for example:  
uA.. :  $\mu$ A.. uPA.. :  $\mu$ PA..  
uPB.. :  $\mu$ PB.. uPC.. :  $\mu$ PC.. uPD.. :  $\mu$ PD..
- CAPACITORS  
uF :  $\mu$ F
- COILS  
uH :  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
*	A-3317-980-A	COMPUTER BOARD, COMPLETE *****				R562	1-216-809-11	METAL CHIP	100	5%	1/16W
		< CAPACITOR >				R563	1-216-809-11	METAL CHIP	100	5%	1/16W
C560	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R564	1-216-797-11	METAL CHIP	10	5%	1/16W
C561	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R565	1-216-845-11	METAL CHIP	100K	5%	1/16W
C562	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R566	1-216-845-11	METAL CHIP	100K	5%	1/16W
C563	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V						
C564	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R567	1-216-809-11	METAL CHIP	100	5%	1/16W
						R568	1-216-809-11	METAL CHIP	100	5%	1/16W
C568	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	R569	1-216-809-11	METAL CHIP	100	5%	1/16W
C569	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R570	1-216-809-11	METAL CHIP	100	5%	1/16W
C570	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	R572	1-216-809-11	METAL CHIP	100	5%	1/16W
C571	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V						
C573	1-131-618-21	ELECT CHIP	22uF	20%	12.5V	R573	1-216-809-11	METAL CHIP	100	5%	1/16W
						R574	1-216-809-11	METAL CHIP	100	5%	1/16W
C574	1-119-751-11	TANTAL. CHIP	22uF	20%	16V	R575	1-216-809-11	METAL CHIP	100	5%	1/16W
C575	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	R576	1-216-845-11	METAL CHIP	100K	5%	1/16W
C578	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	R578	1-216-797-11	METAL CHIP	10	5%	1/16W
C579	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V						
		< CONNECTOR >				R579	1-216-797-11	METAL CHIP	10	5%	1/16W
CN560	1-774-930-21	CONNECTOR, FFC/FPC 51P				R580	1-216-847-11	METAL CHIP	150K	5%	1/16W
CN561	1-573-355-11	CONNECTOR, FFC/FPC 15P				R581	1-216-845-11	METAL CHIP	100K	5%	1/16W
		< DIODE >				R582	1-216-845-11	METAL CHIP	100K	5%	1/16W
D560	8-719-988-61	DIODE 1SS355TE-17				R583	1-216-847-11	METAL CHIP	150K	5%	1/16W
D561	8-719-988-61	DIODE 1SS355TE-17									
		< IC >				R584	1-216-847-11	METAL CHIP	150K	5%	1/16W
IC560	8-759-678-04	IC MB90574PFV-G-297-BND				R585	1-216-845-11	METAL CHIP	100K	5%	1/16W
IC561	8-759-238-47	IC TC74HCT7007AF(EL)				R588	1-216-797-11	METAL CHIP	10	5%	1/16W
IC562	8-759-238-47	IC TC74HCT7007AF(EL)				R589	1-216-845-11	METAL CHIP	100K	5%	1/16W
IC563	8-759-495-76	IC RN5VD33AA-TL				R595	1-216-809-11	METAL CHIP	100	5%	1/16W
IC564	8-759-271-86	IC TC7SH04FU-TE85R									
		< COIL >				R597	1-216-809-11	METAL CHIP	100	5%	1/16W
L560	1-412-058-11	FERRITE BEAD INDUCTOR				R599	1-216-864-11	METAL CHIP	0	5%	1/16W
		< TRANSISTOR >				R600	1-216-821-11	METAL CHIP	1K	5%	1/16W
Q561	8-729-900-53	TRANSISTOR DTC114EKA-T146				R601	1-216-845-11	METAL CHIP	100K	5%	1/16W
Q562	8-729-106-60	TRANSISTOR 2SB1132-T101-QR				R602	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< RESISTOR >									
R560	1-216-809-11	METAL CHIP	100	5%	1/16W	R603	1-216-797-11	METAL CHIP	10	5%	1/16W
R561	1-216-809-11	METAL CHIP	100	5%	1/16W	R606	1-216-845-11	METAL CHIP	100K	5%	1/16W
						R608	1-216-845-11	METAL CHIP	100K	5%	1/16W
						R610	1-216-864-11	METAL CHIP	0	5%	1/16W
						R612	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R613	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R614	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
						R615	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
						R616	1-216-809-11	METAL CHIP	100	5%	1/16W
						R617	1-216-809-11	METAL CHIP	100	5%	1/16W
						R618	1-216-809-11	METAL CHIP	100	5%	1/16W
						R619	1-216-809-11	METAL CHIP	100	5%	1/16W
						R620	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R622	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R623	1-216-821-11	METAL CHIP	1K	5%	1/16W

## COMPUTER

## CONNECTION

## DIGITAL

## KEY

Ref. No.	Part No.	Description	Remark		
R624	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R625	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R627	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R628	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W
R629	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R630	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R631	1-216-073-00	METAL CHIP	10K	5%	1/10W
R632	1-216-845-11	METAL CHIP	100K	5%	1/16W
R633	1-216-845-11	METAL CHIP	100K	5%	1/16W
R635	1-216-853-11	METAL CHIP	470K	5%	1/16W
< NETWORK RESISTOR >					
RB561	1-233-810-21	RES, NETWORK	100K (3216)		
RB562	1-233-810-21	RES, NETWORK	100K (3216)		
< VIBRATOR >					
X560	1-781-002-21	VIBRATOR, CERAMIC (3.68MHz)			
*****					
*	1-678-826-11	CONNECTION BOARD			
*****					
< CAPACITOR >					
C899	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
*****					
*	1-678-398-11	DIGITAL BOARD			
*****					
*	3-043-421-01	BRACKET (PC BOARD)			
< BUZZER >					
BZ800	1-504-920-11	BUZZER			
< CONNECTOR >					
CN803	1-750-862-21	PIN, CONNECTOR (PC BOARD) 5P			
J800	1-793-262-21	PLUG, CONNECTOR (DIGITAL IN)			
*****					
KEY BOARD					
*****					
	1-694-660-11	CONDUCTIVE BOARD, CONNECTION			
*	3-040-992-01	HOLDER (LCD)			
*	3-040-993-01	PLATE (LCD), LIGHT GUIDE			
*	3-040-997-01	PLATE (LCD), GROUND			
*	3-046-372-01	SHEET (REFLECTOR)			
< CAPACITOR >					
C960	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C961	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C962	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C970	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C971	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C972	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V

Ref. No.	Part No.	Description	Remark		
C973	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C974	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C975	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C980	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C981	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C982	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C983	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C984	1-115-412-11	CERAMIC CHIP	680PF	5%	25V
C985	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
< CONNECTOR >					
CN901	1-794-065-11	PLUG, CONNECTOR 14P			
< DIODE >					
D901	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D902	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D903	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D904	8-719-056-82	DIODE UDZ-TE-17-6.2B			
D950	8-719-042-17	DIODE HZU4.3B1RTF			
D961	8-719-976-99	DIODE UDZ-TE-17-5.1B			
D962	8-719-976-99	DIODE UDZ-TE-17-5.1B			
< ROTARY ENCODER >					
EN900	1-475-014-11	ENCODER, ROTARY			
< IC >					
IC960	8-749-012-25	IC RS-170-TU			
IC970	8-759-653-26	IC LC75878W			
IC980	8-759-653-26	IC LC75878W			
< JUMPER RESISTOR >					
JR901	1-216-295-00	SHORT	0		
< LIQUID CRYSTAL DISPLAY >					
LCD900	1-803-912-11	DISPLAY PANEL, LIQUID CRYSTAL			
< DIODE >					
LED900	8-719-064-68	LED LBT676-J2/K1/K2 (RING ILLUMINATION)			
LED901	8-719-064-68	LED LBT676-J2/K1/K2 (RING ILLUMINATION)			
LED902	8-719-064-68	LED LBT676-J2/K1/K2 (RING ILLUMINATION)			
LED903	8-719-064-68	LED LBT676-J2/K1/K2 (RING ILLUMINATION)			
LED951	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
LED952	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
LED953	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
LED954	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
LED955	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
LED956	8-719-078-19	LED LWA673-R1S2 (LCD BACK LIGHT)			
< SWITCH >					
LSW900	1-771-610-11	SWITCH, TACTILE (WITH LED) (OFF)			
LSW901	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)			
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND)			

\*\*\*\*\*

# MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C7	1-164-346-11	CERAMIC CHIP	1uF		16V	C127	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C8	1-163-233-11	CERAMIC CHIP	18PF	5%	50V	C131	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C9	1-162-970-11	CERAMIC CHIP	0.01uF	10%	16V	C151	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C10	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C152	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C11	1-117-681-11	ELECT CHIP	100uF	20%	16V	C200	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C12	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C204	1-126-601-11	ELECT CHIP	2.2uF	20%	50V
C13	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C205	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C17	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C207	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C18	1-126-395-11	ELECT	22uF	20%	16V	C208	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C19	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C209	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C20	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	C210	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C21	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C211	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C22	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	C212	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V
C25	1-115-156-11	CERAMIC CHIP	1uF		10V	C213	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C26	1-126-204-11	ELECT CHIP	47uF	20%	16V	C214	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C27	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C215	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C28	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C231	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C29	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C251	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C30	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	C301	1-124-779-00	ELECT CHIP	10uF	20%	16V
C31	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C302	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C33	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C304	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C37	1-126-204-11	ELECT CHIP	47uF	20%	16V	C305	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C38	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C307	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C39	1-162-959-11	CERAMIC CHIP	330PF	5%	50V	C308	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C40	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C309	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C41	1-164-739-11	CERAMIC CHIP	560PF	5%	50V	C310	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C42	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	C311	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C43	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	C314	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C44	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	C315	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C45	1-164-315-11	CERAMIC CHIP	470PF	5%	50V	C316	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C46	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C318	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C47	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C319	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C48	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C320	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C49	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C321	1-124-779-00	ELECT CHIP	10uF	20%	16V
C50	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C51	1-163-038-00	CERAMIC CHIP	0.1uF		25V	C323	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C100	1-126-601-11	ELECT CHIP	2.2uF	20%	50V	C324	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C108	1-126-601-11	ELECT CHIP	2.2uF	20%	50V	C326	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-109-982-11	CERAMIC CHIP	1uF	10%	10V	C327	1-115-156-11	CERAMIC CHIP	1uF		10V
C111	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V	C328	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C112	1-126-603-11	ELECT CHIP	4.7uF	20%	35V	C651	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C113	1-126-603-11	ELECT CHIP	4.7uF	20%	35V	C652	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C114	1-104-913-11	TANTAL. CHIP	10uF	20%	16V	C653	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	C654	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C116	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C655	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C117	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C657	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C118	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	C658	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C119	1-164-299-11	CERAMIC CHIP	0.22uF	10%	25V	C659	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C120	1-124-779-00	ELECT CHIP	10uF	20%	16V	C660	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C121	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V	C661	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C122	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C700	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C701	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C126	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C702	1-164-315-11	CERAMIC CHIP	470PF	5%	50V

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C703	1-162-920-11	CERAMIC CHIP	27PF	5%	50V		C849	1-165-112-11	CERAMIC CHIP	0.33uF			16V
C704	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C851	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V		C852	1-135-993-11	TANTAL. CHIP	33uF			10V
C706	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C854	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C707	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C856	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C708	1-164-156-11	CERAMIC CHIP	0.1uF		25V		C857	1-104-851-11	TANTAL. CHIP	10uF	20%		10V
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V		C858	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C710	1-124-779-00	ELECT CHIP	10uF	20%	16V		C859	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C711	1-163-133-00	CERAMIC CHIP	470PF	5%	50V		C860	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C712	1-163-133-00	CERAMIC CHIP	470PF	5%	50V		C861	1-124-779-00	ELECT CHIP	10uF	20%		16V
C713	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V		C862	1-124-779-00	ELECT CHIP	10uF	20%		16V
C714	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C863	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
C717	1-126-206-11	ELECT CHIP	100uF	20%	6.3V		C864	1-104-913-11	TANTAL. CHIP	10uF	20%		16V
C718	1-126-206-11	ELECT CHIP	100uF	20%	6.3V		C867	1-163-038-00	CERAMIC CHIP	0.1uF			25V
C719	1-125-565-11	DOUBLE LAYERS	0.22F		5.5V		C868	1-126-395-11	ELECT	22uF	20%		16V
C720	1-164-156-11	CERAMIC CHIP	0.1uF		25V		C869	1-163-038-00	CERAMIC CHIP	0.1uF			25V
C721	1-164-505-11	CERAMIC CHIP	2.2uF		16V								
C722	1-126-395-11	ELECT	22uF	20%	16V				< CONNECTOR >				
C723	1-164-346-11	CERAMIC CHIP	1uF		16V		CN100	1-794-513-21	CONNECTOR, FFC/FPC (ZIF) 35P				
C724	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V		CN700	1-794-364-11	CONNECTOR, (PLUG) 16P				
C725	1-117-681-11	ELECT CHIP	100uF	20%	16V		CN821	1-750-862-21	PIN, CONNECTOR (PC BOARD) 5P				
C726	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		CN823	1-573-355-11	CONNECTOR, FFC/FPC 15P				
C780	1-163-038-00	CERAMIC CHIP	0.1uF		25V		CNJ780	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)				
C802	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V		CNP101	1-774-700-11	ACK, PIN 6P (BUS AUDIO IN, AUDIO OUT)				
C803	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V		CNP820	1-793-277-11	PLUG, CONNECTOR 16P				
C820	1-115-772-31	ELECT	5600uF	20%	16V								
C821	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V				< DIODE >				
C822	1-164-156-11	CERAMIC CHIP	0.1uF		25V		D1	8-719-422-16	DIODE MA8039-L-TX				
C823	1-124-779-00	ELECT CHIP	10uF	20%	16V		D2	8-719-073-01	DIODE MA111-TX				
C824	1-124-779-00	ELECT CHIP	10uF	20%	16V		D3	8-719-073-01	DIODE MA111-TX				
C825	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V		D4	8-719-420-90	DIODE MA8051-M-TX				
C826	1-124-779-00	ELECT CHIP	10uF	20%	16V		D100	8-719-079-29	DIODE PTZ-TE25-22B				
C827	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V		D101	8-719-079-29	DIODE PTZ-TE25-22B				
C828	1-124-779-00	ELECT CHIP	10uF	20%	16V		D102	8-719-079-29	DIODE PTZ-TE25-22B				
C829	1-124-779-00	ELECT CHIP	10uF	20%	16V		D103	8-719-079-29	DIODE PTZ-TE25-22B				
C830	1-124-779-00	ELECT CHIP	10uF	20%	16V		D200	8-719-079-29	DIODE PTZ-TE25-22B				
C831	1-164-156-11	CERAMIC CHIP	0.1uF		25V		D201	8-719-079-29	DIODE PTZ-TE25-22B				
C832	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V								
C833	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V		D202	8-719-079-29	DIODE PTZ-TE25-22B				
C834	1-126-204-11	ELECT CHIP	47uF	20%	16V		D203	8-719-079-29	DIODE PTZ-TE25-22B				
C836	1-117-681-11	ELECT CHIP	100uF	20%	16V		D650	8-719-073-01	DIODE MA111-TX				
C837	1-117-681-11	ELECT CHIP	100uF	20%	16V		D700	8-719-914-44	DIODE DAP202K-T-146				
C838	1-164-816-11	CERAMIC CHIP	220PF	2%	50V		D701	8-719-420-14	DIODE MA8082-M(TX)				
C839	1-115-416-11	CERAMIC CHIP	1000PF	5%	25V		D702	8-719-073-01	DIODE MA111-TX				
C840	1-162-959-11	CERAMIC CHIP	330PF	5%	50V		D714	8-719-057-80	DIODE MA8180-M-TX				
C841	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V		D716	8-719-914-44	DIODE DAP202K-T-146				
C842	1-115-416-11	CERAMIC CHIP	1000PF	5%	25V		D717	8-719-977-12	DIODE MA8068-M-TX				
C843	1-162-959-11	CERAMIC CHIP	330PF	5%	50V		D718	8-719-073-01	DIODE MA111-TX				
C844	1-109-982-11	CERAMIC CHIP	1uF	10%	10V		D719	8-719-977-12	DIODE MA8068-M-TX				
C845	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V		D721	8-719-914-43	DIODE DAN202K-T-146				
C846	1-162-923-11	CERAMIC CHIP	47PF	5%	50V		D722	8-719-073-01	DIODE MA111-TX				
C847	1-164-156-11	CERAMIC CHIP	0.1uF		25V		D723	8-719-422-16	DIODE MA8039-L-TX				
C848	1-135-993-11	TANTAL. CHIP	33uF		10V		D780	8-719-073-01	DIODE MA111-TX				



# MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D781	8-719-017-62	DIODE MA8068-L-TX		IC801	8-759-990-43	IC TL1451ACDB-E20	
D782	8-719-017-62	DIODE MA8068-L-TX		IC802	8-759-460-72	IC BA033FP-E2	
D783	8-719-022-90	DIODE MA8160-M-TX				< JACK >	
D784	8-719-022-90	DIODE MA8160-M-TX		J1	1-785-503-11	JACK (ANT)	
D785	8-719-073-01	DIODE MA1111-TX		J700	1-566-822-41	JACK (REMOTE IN)	
						< COIL >	
D786	8-719-073-01	DIODE MA1111-TX		L280	1-419-476-11	INDUCTOR 250uH	
D787	8-719-022-90	DIODE MA8160-M-TX		L281	1-412-058-11	INDUCTOR CHIP 10uH	
D788	8-719-914-43	DIODE DAN202K-T-146		L286	1-412-055-11	INDUCTOR CHIP 3.3uH	
D789	8-719-073-01	DIODE MA1111-TX		L650	1-412-064-11	INDUCTOR CHIP 100uH	
D820	8-719-049-38	DIODE 1N5404TU		L700	1-412-058-11	INDUCTOR CHIP 10uH	
				L801	1-414-408-11	INDUCTOR CHIP 1uH	
D821	8-719-420-51	DIODE MA729-TX		L802	1-469-388-21	INDUCTOR 100uH	
D822	8-719-053-18	DIODE 1SR154-400TE-25		L803	1-469-388-21	INDUCTOR 100uH	
D824	8-719-053-18	DIODE 1SR154-400TE-25				< TRANSISTOR >	
D825	8-719-053-18	DIODE 1SR154-400TE-25		Q1	8-729-920-21	TRANSISTOR DTC314TK-T-146	
D826	8-719-057-80	DIODE MA8180-M-TX		Q2	8-729-920-21	TRANSISTOR DTC314TK-T-146	
				Q3	8-729-020-67	TRANSISTOR XN1A312-TX	
D827	8-719-977-12	DIODE MA8068-M-TX		Q4	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
D828	8-719-073-01	DIODE MA1111-TX		Q7	8-729-900-53	TRANSISTOR DTC114EKA-T146	
D829	8-719-420-51	DIODE MA729-TX					
D830	8-719-053-18	DIODE 1SR154-400TE-25		Q102	8-729-047-71	TRANSISTOR FMG12-T-148	
D831	8-719-053-18	DIODE 1SR154-400TE-25		Q103	8-729-047-71	TRANSISTOR FMG12-T-148	
				Q200	8-729-047-71	TRANSISTOR FMG12-T-148	
D832	8-719-977-12	DIODE MA8068-M-TX		Q201	8-729-047-71	TRANSISTOR FMG12-T-148	
D833	8-719-420-51	DIODE MA729-TX		Q300	8-729-900-53	TRANSISTOR DTC114EKA-T146	
D834	8-719-420-51	DIODE MA729-TX					
D835	8-719-976-96	DIODE MA8047-H-TX		Q651	8-729-020-67	TRANSISTOR XN1A312-TX	
D836	8-719-055-30	DIODE D1FS4A-TA		Q700	1-801-806-11	TRANSISTOR DTC144EK-T146	
				Q701	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
D837	8-719-055-30	DIODE D1FS4A-TA		Q702	8-729-924-73	TRANSISTOR FMA9-T1	
D838	8-719-423-35	DIODE MA8120-H-TX		Q703	8-729-020-67	TRANSISTOR XN1A312-TX	
D839	8-719-423-21	DIODE MA8110-L-TX					
D840	8-719-914-43	DIODE DAN202K-T-146		Q704	8-729-020-67	TRANSISTOR XN1A312-TX	
D841	8-719-423-15	DIODE MA8110-H-TX		Q705	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
		< FERRITE BEAD >		Q780	8-729-027-23	TRANSISTOR DTA114EKA-T146	
FB301	1-414-235-11	FERRITE BEAD INDUCTOR		Q781	8-729-900-53	TRANSISTOR DTC114EKA-T146	
FB302	1-414-235-11	FERRITE BEAD INDUCTOR		Q782	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
FB303	1-414-235-11	FERRITE BEAD INDUCTOR					
FB304	1-414-230-11	FERRITE BEAD INDUCTOR		Q783	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
FB601	1-414-595-11	FERRITE BEAD INDUCTOR		Q784	8-729-027-23	TRANSISTOR DTA114EKA-T146	
		< IC >		Q821	8-729-019-00	TRANSISTOR 2SD2394-G	
IC1	8-759-650-68	IC AA6588T/V2-118		Q822	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
IC2	8-759-745-64	IC JM4560M-TE2		Q823	8-729-822-84	TRANSISTOR 2SB1202FAT-TL	
IC102	8-759-653-27	IC TDA7402TR					
IC104	8-759-663-88	IC TA8268H		Q824	8-729-900-53	TRANSISTOR DTC114EKA-T146	
IC280	8-759-661-47	IC BA4908-V3		Q825	8-729-020-67	TRANSISTOR XN1A312-TX	
				Q826	8-729-900-53	TRANSISTOR DTC114EKA-T146	
IC284	8-719-679-07	IC NJM2370U05-TE2		Q827	8-729-822-84	TRANSISTOR 2SB1202FAT-TL	
IC300	8-759-667-88	IC AK4523VF-E2		Q828	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
IC301	8-759-096-87	IC TC7WU04FU(TE12R)					
IC650	8-759-681-72	IC HD6432355A18F		Q829	8-729-900-53	TRANSISTOR DTC114EKA-T146	
IC651	8-759-277-63	IC TC7W14FU(TE12R)		Q830	8-729-822-84	TRANSISTOR 2SB1202FAT-TL	
				Q831	8-729-020-67	TRANSISTOR XN1A312-TX	
IC652	8-759-392-22	IC BA3834F		Q832	8-729-807-12	TRANSISTOR 2SD1802FAT-TL	
IC700	8-759-679-63	IC MB90574PMT-G-259-BND		Q833	8-729-920-85	TRANSISTOR 2SD1664-T101-QR	
IC701	8-759-363-81	IC XC61AN4002PR					
IC702	8-759-495-76	IC RN5VD33AA-TL					
IC780	8-759-449-89	IC BA8270F-E2					



Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
Q834	8-729-020-67	TRANSISTOR	XN1A312-TX			R118	1-216-833-11	RES-CHIP	10K	5%	1/16W
Q835	8-729-019-00	TRANSISTOR	2SD2394-G			R119	1-216-809-11	METAL CHIP	100	5%	1/16W
Q836	8-729-020-67	TRANSISTOR	XN1A312-TX			R205	1-216-821-11	METAL CHIP	1K	5%	1/16W
< RESISTOR >						R210	1-216-033-00	METAL CHIP	220	5%	1/10W
R1	1-216-864-11	METAL CHIP	0	5%	1/16W	R211	1-216-081-00	METAL CHIP	22K	5%	1/10W
R2	1-216-841-11	METAL CHIP	47K	5%	1/16W	R212	1-216-033-00	METAL CHIP	220	5%	1/10W
R3	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R4	1-216-839-11	METAL CHIP	33K	5%	1/16W	R214	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R5	1-216-864-11	METAL CHIP	0	5%	1/16W	R215	1-216-834-11	METAL CHIP	12K	5%	1/16W
R6	1-216-821-11	METAL CHIP	1K	5%	1/16W	R216	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R7	1-216-295-00	SHORT	0			R217	1-216-834-11	METAL CHIP	12K	5%	1/16W
R8	1-216-864-11	METAL CHIP	0	5%	1/16W	R218	1-216-833-11	RES-CHIP	10K	5%	1/16W
R9	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R219	1-216-809-11	METAL CHIP	100	5%	1/16W
R11	1-216-809-11	METAL CHIP	100	5%	1/16W	R300	1-216-821-11	METAL CHIP	1K	5%	1/16W
R12	1-216-809-11	METAL CHIP	100	5%	1/16W	R302	1-216-864-11	METAL CHIP	0	5%	1/16W
R13	1-216-864-11	METAL CHIP	0	5%	1/16W	R303	1-216-864-11	METAL CHIP	0	5%	1/16W
R14	1-216-864-11	METAL CHIP	0	5%	1/16W	R307	1-216-025-11	RES-CHIP	100	5%	1/10W
R15	1-216-864-11	METAL CHIP	0	5%	1/16W	R308	1-216-025-11	RES-CHIP	100	5%	1/10W
R17	1-216-837-11	METAL CHIP	22K	5%	1/16W	R309	1-216-821-11	METAL CHIP	1K	5%	1/16W
R18	1-216-841-11	METAL CHIP	47K	5%	1/16W	R310	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R20	1-216-025-11	RES-CHIP	100	5%	1/10W	R311	1-216-833-11	RES-CHIP	10K	5%	1/16W
R21	1-216-025-11	RES-CHIP	100	5%	1/10W	R312	1-216-025-11	RES-CHIP	100	5%	1/10W
R22	1-216-295-00	SHORT	0			R313	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R23	1-216-853-11	METAL CHIP	470K	5%	1/16W	R314	1-216-049-11	RES-CHIP	1K	5%	1/10W
R24	1-216-821-11	METAL CHIP	1K	5%	1/16W	R315	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R25	1-216-835-11	METAL CHIP	15K	5%	1/16W	R316	1-216-857-11	METAL CHIP	1M	5%	1/16W
R28	1-216-817-11	METAL CHIP	470	5%	1/16W	R601	1-216-295-00	SHORT	0		
R29	1-216-809-11	METAL CHIP	100	5%	1/16W	R603	1-216-813-11	METAL CHIP	220	5%	1/16W
R30	1-216-809-11	METAL CHIP	100	5%	1/16W	R651	1-216-845-11	METAL CHIP	100K	5%	1/16W
R31	1-216-001-00	METAL CHIP	10	5%	1/10W	R652	1-216-845-11	METAL CHIP	100K	5%	1/16W
R32	1-216-295-00	SHORT	0			R653	1-216-817-11	METAL CHIP	470	5%	1/16W
R33	1-216-001-00	METAL CHIP	10	5%	1/10W	R654	1-216-813-11	METAL CHIP	220	5%	1/16W
R34	1-216-845-11	METAL CHIP	100K	5%	1/16W	R655	1-216-864-11	METAL CHIP	0	5%	1/16W
R35	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R656	1-216-849-11	METAL CHIP	220K	5%	1/16W
R36	1-216-833-11	RES-CHIP	10K	5%	1/16W	R660	1-216-097-11	RES-CHIP	100K	5%	1/10W
R37	1-216-833-11	RES-CHIP	10K	5%	1/16W	R661	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R38	1-216-809-11	METAL CHIP	100	5%	1/16W	R662	1-216-033-00	METAL CHIP	220	5%	1/10W
R39	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R663	1-216-033-00	METAL CHIP	220	5%	1/10W
R40	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R664	1-216-813-11	METAL CHIP	220	5%	1/16W
R41	1-216-857-11	METAL CHIP	1M	5%	1/16W	R665	1-216-845-11	METAL CHIP	100K	5%	1/16W
R42	1-216-809-11	METAL CHIP	100	5%	1/16W	R666	1-216-845-11	METAL CHIP	100K	5%	1/16W
R43	1-216-864-11	METAL CHIP	0	5%	1/16W	R667	1-216-845-11	METAL CHIP	100K	5%	1/16W
R44	1-216-864-11	METAL CHIP	0	5%	1/16W	R668	1-216-845-11	METAL CHIP	100K	5%	1/16W
R105	1-216-821-11	METAL CHIP	1K	5%	1/16W	R669	1-216-833-11	RES-CHIP	10K	5%	1/16W
R110	1-216-033-00	METAL CHIP	220	5%	1/10W	R670	1-216-842-11	METAL CHIP	56K	5%	1/16W
R111	1-216-081-00	METAL CHIP	22K	5%	1/10W	R672	1-216-864-11	METAL CHIP	0	5%	1/16W
R112	1-216-033-00	METAL CHIP	220	5%	1/10W	R702	1-216-809-11	METAL CHIP	100	5%	1/16W
R113	1-216-081-00	METAL CHIP	22K	5%	1/10W	R703	1-216-097-11	RES-CHIP	100K	5%	1/10W
R114	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R704	1-216-815-11	METAL CHIP	330	5%	1/16W
R115	1-216-834-11	METAL CHIP	12K	5%	1/16W	R705	1-216-025-11	RES-CHIP	100	5%	1/10W
R116	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R707	1-216-841-11	METAL CHIP	47K	5%	1/16W
R117	1-216-834-11	METAL CHIP	12K	5%	1/16W	R709	1-216-809-11	METAL CHIP	100	5%	1/16W

# MAIN

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R710	1-216-025-11	RES-CHIP	100	5%	1/10W		R760	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R711	1-216-809-11	METAL CHIP	100	5%	1/16W		R761	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R712	1-216-837-11	METAL CHIP	22K	5%	1/16W		R762	1-216-853-11	METAL CHIP	470K	5%	1/16W	
					(TYPE2)		R763	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R712	1-216-841-11	METAL CHIP	47K	5%	1/16W		R764	1-216-821-11	METAL CHIP	1K	5%	1/16W	
					(TYPE3)								
R713	1-216-837-11	METAL CHIP	22K	5%	1/16W		R765	1-216-821-11	METAL CHIP	1K	5%	1/16W	
					(TYPE3)		R766	1-216-837-11	METAL CHIP	22K	5%	1/16W	
							R767	1-216-847-11	METAL CHIP	150K	5%	1/16W	
R713	1-216-864-11	METAL CHIP	0	5%	1/16W		R768	1-216-833-11	RES-CHIP	10K	5%	1/16W	
					(TYPE1)		R769	1-216-864-11	METAL CHIP	0	5%	1/16W	
R714	1-216-025-11	RES-CHIP	100	5%	1/10W								
R715	1-216-809-11	METAL CHIP	100	5%	1/16W		R770	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R716	1-216-809-11	METAL CHIP	100	5%	1/16W		R771	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R717	1-216-809-11	METAL CHIP	100	5%	1/16W		R780	1-216-833-11	RES-CHIP	10K	5%	1/16W	
							R781	1-216-809-11	METAL CHIP	100	5%	1/16W	
R718	1-216-097-11	RES-CHIP	100K	5%	1/10W		R782	1-216-089-11	RES-CHIP	47K	5%	1/10W	
R719	1-216-025-11	RES-CHIP	100	5%	1/10W								
R720	1-216-809-11	METAL CHIP	100	5%	1/16W		R783	1-216-097-11	RES-CHIP	100K	5%	1/10W	
R721	1-216-833-11	RES-CHIP	10K	5%	1/16W		R784	1-216-089-11	RES-CHIP	47K	5%	1/10W	
R722	1-216-809-11	METAL CHIP	100	5%	1/16W		R785	1-216-097-11	RES-CHIP	100K	5%	1/10W	
							R786	1-216-150-11	RES-CHIP	10	5%	1/8W	
R723	1-216-833-11	RES-CHIP	10K	5%	1/16W		R787	1-216-841-11	METAL CHIP	47K	5%	1/16W	
R724	1-216-855-11	METAL CHIP	680K	5%	1/16W								
R725	1-216-845-11	METAL CHIP	100K	5%	1/16W		R802	1-216-025-11	RES-CHIP	100	5%	1/10W	
R726	1-216-845-11	METAL CHIP	100K	5%	1/16W		R803	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R727	1-216-809-11	METAL CHIP	100	5%	1/16W		R805	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R821	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R728	1-216-809-11	METAL CHIP	100	5%	1/16W		R822	1-216-198-00	RES-CHIP	1K	5%	1/8W	
R729	1-216-845-11	METAL CHIP	100K	5%	1/16W								
R730	1-216-825-11	METAL CHIP	2.2K	5%	1/16W		R823	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	
R731	1-216-845-11	METAL CHIP	100K	5%	1/16W		R824	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R733	1-216-845-11	METAL CHIP	100K	5%	1/16W		R826	1-216-839-11	METAL CHIP	33K	5%	1/16W	
							R827	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R734	1-216-845-11	METAL CHIP	100K	5%	1/16W		R828	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R735	1-216-057-00	METAL CHIP	2.2K	5%	1/10W								
R736	1-216-057-00	METAL CHIP	2.2K	5%	1/10W		R829	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R737	1-216-089-11	RES-CHIP	47K	5%	1/10W		R830	1-216-833-11	RES-CHIP	10K	5%	1/16W	
R738	1-216-089-11	RES-CHIP	47K	5%	1/10W		R831	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
							R832	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R739	1-216-222-00	RES-CHIP	10K	5%	1/8W		R833	1-218-732-11	METAL CHIP	47K	0.5%	1/16W	
R740	1-216-025-11	RES-CHIP	100	5%	1/10W								
R741	1-216-675-11	METAL CHIP	10K	0.5%	1/10W		R834	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R742	1-216-025-11	RES-CHIP	100	5%	1/10W		R835	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R743	1-216-675-11	METAL CHIP	10K	0.5%	1/10W		R836	1-216-839-11	METAL CHIP	33K	5%	1/16W	
							R837	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R744	1-216-049-11	RES-CHIP	1K	5%	1/10W		R838	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R745	1-216-049-11	RES-CHIP	1K	5%	1/10W								
R746	1-216-049-11	RES-CHIP	1K	5%	1/10W		R839	1-216-839-11	METAL CHIP	33K	5%	1/16W	
R747	1-216-049-11	RES-CHIP	1K	5%	1/10W		R840	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R748	1-216-049-11	RES-CHIP	1K	5%	1/10W		R841	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	
							R842	1-216-033-00	METAL CHIP	220	5%	1/10W	
R749	1-216-025-11	RES-CHIP	100	5%	1/10W		R843	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R750	1-216-049-11	RES-CHIP	1K	5%	1/10W								
R751	1-216-049-11	RES-CHIP	1K	5%	1/10W		R844	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R752	1-216-821-11	METAL CHIP	1K	5%	1/16W		R845	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R753	1-216-845-11	METAL CHIP	100K	5%	1/16W		R846	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
							R847	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	
R754	1-216-821-11	METAL CHIP	1K	5%	1/16W		R850	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R756	1-216-845-11	METAL CHIP	100K	5%	1/16W								
R757	1-216-025-11	RES-CHIP	100	5%	1/10W		R851	1-216-029-00	METAL CHIP	150	5%	1/10W	
R758	1-218-716-11	METAL CHIP	10K	0.5%	1/16W		R852	1-216-182-00	RES-CHIP	220	5%	1/8W	
R759	1-216-025-11	RES-CHIP	100	5%	1/10W		R853	1-216-190-00	RES-CHIP	470	5%	1/8W	

## MAIN

## RELAY

## SENSOR

## SERVO

Ref. No.	Part No.	Description	Remark
R856	1-216-033-00	METAL CHIP 220 5%	1/10W
R857	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R858	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R859	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R860	1-218-716-11	METAL CHIP 10K 0.5%	1/16W
R861	1-218-704-11	METAL CHIP 3.3K 0.5%	1/16W
R862	1-216-190-00	RES-CHIP 470 5%	1/8W
R864	1-216-845-11	METAL CHIP 100K 5%	1/16W
R865	1-216-295-00	SHORT 0	
R866	1-216-049-11	RES-CHIP 1K 5%	1/10W
R867	1-216-041-00	METAL CHIP 470 5%	1/10W
R869	1-216-295-00	SHORT 0	
		< NETWORK RESISTOR >	
RB700	1-233-576-11	RES, CHIP NETWORK 100	
		< SWITCH >	
S700	1-571-754-31	SWITCH, PUSH (1 KEY) (NOSE DET)	
		< TUNER >	
TU1	A-3220-738-A	TUNER UNIT (TUX-020)	
		< THERMISTOR (POSITIVE) >	
TH780	1-801-792-21	THERMISTOR, POSITIVE	
		< VIBRATOR >	
X1	1-781-906-21	VIBRATOR, CRYSTAL (4.332MHz)	
X300	1-781-905-21	VIBRATOR, CRYSTAL (22.5792MHz)	
X650	1-781-565-11	VIBRATOR, CRYSTAL (18.432MHz)	
X700	1-760-928-21	VIBRATOR, CRYSTAL (32.768kHz)	
X701	1-781-907-21	VIBRATOR, CRYSTAL (3.6864MHz)	
*****			
*	1-678-397-11	RELAY BOARD	
		*****	
		< CONNECTOR >	
CN800	1-794-064-11	SOCKET, CONNECTOR 14P	
CN801	1-794-363-11	CONNECTOR (RECEPTACLE) 16P	
* CN802	1-569-775-21	PIN, CONNECTOR (SMD) 5P	
		< DIODE >	
D800	8-719-977-12	DIODE MA8068-M-TX	
D801	8-719-977-12	DIODE MA8068-M-TX	
D802	8-719-057-80	DIODE MA8180-M-TX	
D803	8-719-977-12	DIODE MA8068-M-TX	
D804	8-719-977-12	DIODE MA8068-M-TX	
D805	8-719-977-12	DIODE MA8068-M-TX	
D806	8-719-977-12	DIODE MA8068-M-TX	
D807	8-719-977-12	DIODE MA8068-M-TX	
D808	8-719-977-12	DIODE MA8068-M-TX	
D809	8-719-977-12	DIODE MA8068-M-TX	
D810	8-719-977-12	DIODE MA8068-M-TX	
D811	8-719-977-12	DIODE MA8068-M-TX	

Ref. No.	Part No.	Description	Remark
		< DIODE >	
LED800	8-719-064-72	LED BG1101F-10-TR (DISC IN)	
		< SWITCH >	
LSW800	1-771-609-11	SWITCH, TACTILE (WITH LED) (▲)	
		< RESISTOR >	
R800	1-216-041-00	METAL CHIP 470 5%	1/10W
		< SWITCH >	
S800	1-572-921-11	SWITCH, KEY BOARD (RESET)	
*****			
A-3317-305-A		SENSOR BOARD, COMPLETE	
		*****	
		< CAPACITOR >	
C553	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C554	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C555	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C556	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C557	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C558	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C559	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
		< CONNECTOR >	
CN550	1-691-381-11	CONNECTOR, FFC/FPC 17P	
* CN551	1-770-619-11	PIN, CONNECTOR 2P	
CN552	1-770-619-41	PIN, CONNECTOR 2P	
		< SWITCH >	
SW550	1-572-467-61	SWITCH, PUSH (1 KEY) (LIMIT IN)	
SW551	1-771-606-21	SWITCH, 2P PUSH (2 KEY) (PROTECT, REFLECT)	
SW552	1-572-688-11	SWITCH, PUSH (1 KEY) (DISC IN)	
SW553	1-692-849-21	SWITCH, PUSH (1 KEY) (PACK IN)	
SW554	1-572-288-21	SWITCH, PUSH (REC-P)	
SW555	1-572-688-11	SWITCH, PUSH (1 KEY) (PLAY-P)	
*****			
* A-3326-079-A		SERVO BOARD, COMPLETE	
		*****	
		< CAPACITOR >	
C400	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C401	1-104-852-11	TANTAL. CHIP 22uF 20%	10V
C402	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C403	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C404	1-162-927-11	CERAMIC CHIP 100PF 5%	50V
C406	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C407	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C408	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V

# SERVO

Ref. No.	Part No.	Description			Remark
C410	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C411	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C415	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C416	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C417	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C418	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C419	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C420	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C423	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C424	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C425	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C426	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C428	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C429	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C440	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C441	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C443	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C444	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C445	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C446	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C447	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C450	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C452	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C453	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C454	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C457	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C458	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C459	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C460	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C462	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C467	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C469	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C470	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C471	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C472	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C473	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C474	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C475	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C510	1-164-611-11	CERAMIC CHIP	0.001uF	10%	500V
C511	1-107-836-11	ELECT CHIP	22uF	20%	8V
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C516	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C517	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C520	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C524	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C527	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C528	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C529	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C530	1-119-751-11	TANTAL. CHIP	22uF	20%	16V
C533	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C534	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN400	1-785-771-21	CONNECTOR, FFC/FPC (ZIF) 35P	
CN401	1-774-930-21	CONNECTOR, FFC/FPC 51P	
CN440	1-573-361-11	CONNECTOR, FFC/FPC 21P	
CN510	1-691-372-21	CONNECTOR, FFC/FPC 8P	
CN520	1-691-381-11	CONNECTOR, FFC/FPC 17P	
		< DIODE >	
D440	8-719-988-61	DIODE 1SS355TE-17	
D441	8-719-988-61	DIODE 1SS355TE-17	
D510	8-719-046-86	DIODE F1J6TP	
D511	8-719-046-86	DIODE F1J6TP	
D520	8-719-420-14	DIODE MA8082-M(TX)	
		< FERRITE BEAD >	
FB443	1-414-235-22	FERRITE BEAD INDUCTOR	
FB444	1-414-235-22	FERRITE BEAD INDUCTOR	
		< IC >	
IC400	8-752-384-47	IC CXD2652AR	
IC401	8-759-538-44	IC MSM51V17400D-10TK-FS	
IC402	8-759-661-26	IC AT24C16N-10SI-TR	
IC403	8-759-096-87	IC TC7WU04FU(TE12R)	
IC440	8-752-080-95	IC CXA2523AR	
IC442	8-729-903-10	TRANSISTOR FMW1-T-148	
IC510	8-759-523-48	IC TC74ACT540FT(EL)	
IC520	8-759-430-25	IC BH6511FS-E2	
IC521	8-759-040-83	IC BA6287F-T1	
		< COIL >	
L400	1-412-058-11	INDUCTOR CHIP 10uH	
L401	1-500-245-11	FERRITE BEAD INDUCTOR	
L440	1-412-058-11	INDUCTOR CHIP 10uH	
L442	1-414-234-22	FERRITE BEAD INDUCTOR	
L443	1-414-234-22	FERRITE BEAD INDUCTOR	
L444	1-414-234-22	FERRITE BEAD INDUCTOR	
		< TRANSISTOR >	
Q400	8-729-230-49	TRANSISTOR 2SC2712Y-TE85L	
Q440	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q441	8-729-106-60	TRANSISTOR 2SB1132-T101-QR	
Q442	8-729-028-91	TRANSISTOR DTA144EUA-T106	
Q443	8-729-101-07	TRANSISTOR 2SB798-T1DK	
Q444	8-729-028-91	TRANSISTOR DTA144EUA-T106	
Q445	8-729-028-99	TRANSISTOR DTC114YUA-T106	
Q446	8-729-028-99	TRANSISTOR DTC114YUA-T106	
Q447	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR	
Q510	8-729-042-92	FET 2SK1470-TD	
Q511	8-729-042-91	FET 2SJ190-TD	
Q512	8-729-028-96	TRANSISTOR DTC114EUT106	
Q520	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
< RESISTOR >							R480	1-216-863-11	RES-CHIP	3.3M	5%		1/16W
							R482	1-216-821-11	METAL CHIP	1K	5%		1/16W
R400	1-216-809-11	METAL CHIP	100	5%		1/16W	R483	1-216-821-11	METAL CHIP	1K	5%		1/16W
R401	1-216-833-11	RES-CHIP	10K	5%		1/16W	R484	1-216-841-11	METAL CHIP	47K	5%		1/16W
R402	1-216-845-11	METAL CHIP	100K	5%		1/16W	R485	1-216-821-11	METAL CHIP	1K	5%		1/16W
R403	1-216-855-11	METAL CHIP	680K	5%		1/16W							
R404	1-216-809-11	METAL CHIP	100	5%		1/16W	R486	1-216-833-11	RES-CHIP	10K	5%		1/16W
							R487	1-216-864-11	METAL CHIP	0	5%		1/16W
R408	1-216-827-11	METAL CHIP	3.3K	5%		1/16W	R512	1-216-089-11	RES-CHIP	47K	5%		1/10W
R409	1-216-821-11	METAL CHIP	1K	5%		1/16W	R513	1-216-089-11	RES-CHIP	47K	5%		1/10W
R411	1-216-821-11	METAL CHIP	1K	5%		1/16W	R516	1-216-833-11	RES-CHIP	10K	5%		1/16W
R412	1-216-811-11	METAL CHIP	150	5%		1/16W							
R413	1-216-819-11	METAL CHIP	680	5%		1/16W	R517	1-216-295-00	SHORT	0			
							R520	1-216-295-00	SHORT	0			
R414	1-216-853-11	METAL CHIP	470K	5%		1/16W	R521	1-216-295-00	SHORT	0			
R415	1-216-829-11	METAL CHIP	4.7K	5%		1/16W	R522	1-216-295-00	SHORT	0			
R416	1-216-829-11	METAL CHIP	4.7K	5%		1/16W	R523	1-216-295-00	SHORT	0			
R420	1-216-809-11	METAL CHIP	100	5%		1/16W							
R421	1-216-857-11	METAL CHIP	1M	5%		1/16W	R524	1-216-057-00	METAL CHIP	2.2K	5%		1/10W
							< NETWORK RESISTOR >						
R440	1-218-704-11	METAL CHIP	3.3K	0.5%		1/16W	RB400	1-233-576-11	RES, CHIP NETWORK	100			
R441	1-218-708-11	METAL CHIP	4.7K	0.5%		1/16W	RB402	1-233-576-11	RES, CHIP NETWORK	100			
R442	1-216-065-11	RES-CHIP	4.7K	5%		1/10W	RB403	1-239-419-11	NETWORK RESISTOR (CHIP)	470			
R443	1-216-065-11	RES-CHIP	4.7K	5%		1/10W	RB404	1-233-576-11	RES, CHIP NETWORK	100			
R444	1-216-073-00	METAL CHIP	10K	5%		1/10W	RB405	1-233-576-11	RES, CHIP NETWORK	100			
							*****						
R446	1-218-700-11	METAL CHIP	2.2K	0.5%		1/16W	MISCELLANEOUS						
R447	1-218-700-11	METAL CHIP	2.2K	0.5%		1/16W	*****						
R448	1-216-864-11	METAL CHIP	0	5%		1/16W	11	1-790-926-31	CORD (WITH CONNECTOR) (POWER)				
R449	1-216-864-11	METAL CHIP	0	5%		1/16W	159	1-790-418-11	MICRO COMPUTER FLEXIBLE BOARD				
R450	1-216-853-11	METAL CHIP	470K	5%		1/16W	△ 207	8-583-057-02	PICK-UP, OPTICAL KMS-263A/J1N				
							210	1-790-417-11	OP FLEXIBLE BOARD				
R451	1-218-700-11	METAL CHIP	2.2K	0.5%		1/16W	219	1-790-416-11	SENSOR FLEXIBLE BOARD				
R452	1-216-833-11	RES-CHIP	10K	5%		1/16W	221	1-790-434-11	OWH FLEXIBLE BOARD				
R453	1-216-864-11	METAL CHIP	0	5%		1/16W	222	1-500-412-21	HEAD, OVER WRITE (RF325-74A)				
R454	1-216-845-11	METAL CHIP	100K	5%		1/16W	F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A				
R455	1-216-827-11	METAL CHIP	3.3K	5%		1/16W	M501	X-3376-526-1	MOTOR ASSY, SLED (SLED)				
							M502	X-3376-525-1	MOTOR ASSY, LOADING (LOADING)				
R456	1-216-833-11	RES-CHIP	10K	5%		1/16W	M503	A-3301-942-A	MOTOR ASSY, SPINDLE (SPINDLE)				
R457	1-216-827-11	METAL CHIP	3.3K	5%		1/16W	*****						
R458	1-216-833-11	RES-CHIP	10K	5%		1/16W	ACCESSORIES & PACKING MATERIALS						
R459	1-216-845-11	METAL CHIP	100K	5%		1/16W	*****						
R460	1-216-833-11	RES-CHIP	10K	5%		1/16W	3-048-179-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH, SWEDISH,PORTUGUESE,RUSSIAN) (TYPE1)					
							3-048-179-21	MANUAL, INSTRUCTION (FRENCH,GERMAN, DUTCH,ITALIAN,GREEK) (TYPE3)					
R461	1-216-833-11	RES-CHIP	10K	5%		1/16W	3-048-179-31	MANUAL, INSTRUCTION (GERMAN) (TYPE2)					
R462	1-216-841-11	METAL CHIP	47K	5%		1/16W	3-048-180-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH,SPANISH,SWEDISH,PORTUGUESE, RUSSIAN) (TYPE1)					
R463	1-216-809-11	METAL CHIP	100	5%		1/16W	3-048-180-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN,DUTCH,ITALIAN,GREEK) (TYPE2,3)					
R464	1-216-864-11	METAL CHIP	0	5%		1/16W	X-3378-490-1	CASE (PANEL) ASSY (for FRONT PANEL)					
R465	1-216-819-11	METAL CHIP	680	5%		1/16W	*****						
R466	1-216-864-11	METAL CHIP	0	5%		1/16W							
R467	1-216-815-11	METAL CHIP	330	5%		1/16W							
R469	1-216-864-11	METAL CHIP	0	5%		1/16W							
R470	1-216-864-11	METAL CHIP	0	5%		1/16W							
R471	1-218-688-11	METAL CHIP	680	0.5%		1/16W							
R472	1-216-829-11	METAL CHIP	4.7K	5%		1/16W							
R473	1-216-097-11	RES-CHIP	100K	5%		1/10W							
R474	1-219-724-11	METAL CHIP	1	1%		1/4W							
R476	1-220-149-11	REGISTER	2.2	10%		1/2W							
R478	1-216-065-11	RES-CHIP	4.7K	5%		1/10W							
R479	1-216-853-11	METAL CHIP	470K	5%		1/16W							

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
*****			
HARDWARE LIST			
*****			
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-621-255-35	SCREW +P 2X5	
#3	7-621-772-20	SCREW +B 2X5	
#4	7-627-553-28	SCREW, PRECISION +P 2X2.5	
#5	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT	
#6	7-685-753-09	SCREW +PTT 3X10 (S)	
#7	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#8	7-627-852-37	SCREW, PRECISION +P 1.7X1.8 TYPE3	
#9	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE3	
#10	7-628-253-00	SCREW +PS 2X4	
#11	7-621-555-10	SCREW +K 2X3	
*****			

PARTS FOR INSTALLATION AND CONNECTIONS

\*\*\*\*\*

301	X-3373-602-1	FRAME ASSY
302	X-3366-405-1	SCREW ASSY (EXP), FITTING
303	3-386-828-01	SCREW, FITTING
304	3-349-410-01	BUSHING
305	3-040-979-02	COLLAR
306	3-934-325-01	SCREW, +K (5X8) TAPPING
307	1-465-459-21	ADAPTOR, ANTENNA
308	3-027-138-01	SPRING, FITTING
309	1-790-926-31	CORD (WITH CONNECTOR) (POWER)
310	X-3379-045-1	BRACKET (OPT) ASSY
311	7-621-284-20	SCREW +P 2.6X6

